

Substance Use and Abuse in Durham County
The Partnership for a Healthy Durham
Substance Abuse and Mental Health Committee

Funded by

The Durham Center

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October 27, 2010

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2010

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Executive Summary

Approximately 19,500 Durham County residents abuse or are addicted to illegal drugs, prescription medications, or alcohol in 2008(56). Substance abuse not only impacts the individual and his/her family, but also the community.

This report compiles information from a variety of agencies and sources on how substance use and abuse is affecting Durham County. This report follows a strategy suggested by the National Institute of Drug Abuse for community surveillance. By examining information from a variety of sources such as law enforcement agencies, treatment providers, information on self-reported prevalence of use, drug seizures, and motor vehicle accidents, a better understanding of the substance use problem in the community becomes apparent.

Health Related Outcomes

Substance abuse affects the physical health of the individual, from the spread of disease to death, and the emergency health care system. For example, Durham County consistently ranks as one of the top three counties in the state with the highest HIV rate. In the most recent years, it appears that substance use is not as directly related to the many new cases of HIV infection as it had been in the early 1990s. Of the 75 newly diagnosed cases in 2007, only five were thought to be transmitted through injection drug use. It is worth noting that the mode of transmission was missing for one third of the cases and that alcohol and substance use increase risky behaviors such as risky sexual practices. Additionally, substance abuse may result in injury and death in users. In both 2008 and 2009, there were over 3,000 admissions a year for Durham residents to the emergency department for substance-related conditions (a rate of 102 and 120 per 10,000 residents, respectively) and 36 Durham residents died each year either directly or in part related to substance use at the time of death.

Social Services

National data suggest that substance abuse is associated with child maltreatment. While the to illustrate the impact of substance use on all child maltreatment reports are not available for Durham County, we do know that, in 2008, 40% of children were placed in foster care due their parent's drug or alcohol abuse as a primary or contributory factor.

Homelessness

The number of homeless individuals in Durham County has continued to increase since 2001. Of the homeless counted, an average of 61% suffered from substance use disorders. 2010 marks the first year in a decade in which the percent abusing substances decreased to less than half (40%) of the total individuals identified as homeless.

Law Enforcement and Substance Use Issues

Many individuals abusing substances come to the attention of law enforcement and the court system because of domestic violence, possession of illicit substances, under-age drinking, or driving under the influence of substances. The number of calls to the Durham County Sheriff's Office related to controlled substances and alcohol in 2009 was up 13 percent from 2008 (573 vs 508). Calls related to drug complaints and narcotics were two categories with noticeable increases. In approximately one third of the 1,800 domestic violence reports to Durham Police Department, the suspect had used alcohol or illicit substances and in about 12 percent the victim had used alcohol or illicit substances. Other substance-related offenses varied depending on the age of the suspect—youth under 18 are more likely to be arrested for possession of marijuana (70 arrests), whereas, adults are charged most often with driving under the influence (463 arrests). Similar to the findings from law enforcement, Durham Public Schools reported that students' possession of a controlled substance made up 40% of all reportable incidents on school grounds. Not surprisingly, arrests for alcohol or other substances are more likely to occur on high school grounds than middle school grounds. Over the last three school years (2006-2007, 2007-2008, 2008-2009), Southern High School had a rate of 17.3 per 1,000 students, Hillside High School had a rate of 16.4 arrests for alcohol or substances relative to 15.7 at Northern High School, Southern School of Engineering had a rate of 14.8, and Riverside had a rate of 11.5.

As a result of the interaction between substance use and law enforcement, 35% of prison inmates from Durham and 28% of inmates in the Durham County jail were convicted of a drug offense. Over 60% of inmates in prison and 17% in the Durham County jail needed substance abuse treatment. The data of youth involved with juvenile justice mirror the findings in the adults system—an estimated 28 - 60% needed substance abuse treatment.

Alcohol

While the rate of binge and heavy drinking in Durham is similar to data across the state, the consequences of the behavior may seriously impact health. According to data from the Behavioral Risk Factor Surveillance Survey (BRFSS) in 2009, 15.7 percent of Durham residents reported binge drinking and 7.1 percent reported heavy drinking. Drinking also impairs the driver's ability to safely operate a vehicle. In 2008, there were 23 fatal car accidents in Durham County and 30 percent (7 accidents) were related to alcohol. Moreover, according to the BRFSS, 3 percent of Durham residents have driven after having had too much to drink in 2008.

Smoking

Smoking is the leading cause of preventable death. Lung cancer is the most common form of cancer nationally and in Durham. Cancer is the leading cause of death for Durham residents. Smoking is an attributable cause of lung cancer in 90 percent of cases. Approximately 10.6 percent of Durham residents are current smokers and 6.2 percent report smoking every day. Smoking during pregnancy can harm the unborn child. Across North Carolina, from 1998 through 2009, there has been a decline in smoking during pregnancy. In Durham, the percent of women who smoke during pregnancy is lower than it is in the rest of the state (5.4 percent vs. 10.2 percent). However, there has been an increase in the percent of minority women who smoke during pregnancy in recent years.

Youth and substance use

Substance use is prevalent among our youth, yet, comparable to the state rates. Results from the Youth Risk Behavior Survey suggest that a third of middle school students and 64% of high school students had ever had a drink of alcohol. Eighteen percent of middle school students and 42 percent of high school students admitted to using alcohol in the last 30 days, while 45 percent in high school admitted to using marijuana.

Supply of Illicit Substances

The supply of drugs and alcohol in our community helps to identify trends in the abuse and use of the substances. In general, the amount of drugs seized in the last 6 months in the Triangle area seems to be relatively low, but does not necessarily mean the drugs are not available in high quantities. The price of the substances tends to directly impact demand. The Durham County Sheriff's Office reports that the price of heroin in 2010 is lower than it was in 2006 while the price of crack has remained relatively constant at \$20 a rock (1 rock=1 dose). Marijuana and many prescription drugs; like Oxycodone, Oxycotin, Vicodin and Percocet; are priced low (\$3 - \$20/dose). Liquor is managed by local Alcohol Beverage Control (ABC) Boards. In 2009, there were \$18.4 million spent on liquor in Durham County. This is up from \$16.6 (in 2009 dollars) in 2008.

Treatment Services in Durham County

The Durham Center Local Management Entity (LME) manages services for individuals with limited or no resources in Durham County. The Durham County Criminal Justice Resource Center, sister county agency and partner to The Durham Center, provides a majority of services for individuals involved with the criminal justice system. The Durham Center offers a wide array of outpatient services from basic, low-level services to intensive outpatient, residential, and crisis services.

The Durham Center reported serving 180 adolescents (12% of need) and 1,899 adults (11% of need) in State Fiscal Year 2009. There is no community-wide information on

treatment for individuals with private insurance, other than national estimates of need and participation.

Among youth in treatment for substance use, 90 percent indicated using marijuana in the past year, 41 percent indicated using tobacco, and 36 percent indicated using alcohol. Adults in treatment reported using tobacco (71 percent), alcohol (49 percent), cocaine (48 percent), marijuana (41 percent), heroin (25 percent), other opiates (19 percent), oxycontin (9 percent), benzodiazepine (7 percent), over the counter (1 percent), and methamphetamine (1 percent). There were a total of 2,155 admissions in State Fiscal Year 2010 (July 1, 2009 – June 30, 2010) to 23-hour crisis observation beds and 1,463 to 2 – 14 day stabilization beds. Alcohol was the primary drug of choice for patients admitted to the crisis services.

In order for this report to be most useful in planning prevention and intervention efforts, it is important for community members to read, reflect, and communicate with others about the report. Community members might have additional information to contribute or may have additional questions to help identify next steps. The Partnership for a Healthy Durham, Substance Abuse and Mental Health Committee is in a position to develop an action plan based on the findings of this study.

Introduction to the Surveillance Network

Substance abuse affects many aspects of society, including but not limited to: health care, crime rates, unemployment, education, and family life. Many of us have seen unpleasant evidence through our personal experiences and from the experiences of family and friends. While agencies and individuals in our community are making real strides in addressing issues related to substance abuse, our community's responses are often hampered by our collective difficulty to view these issues comprehensively. Looking in isolation at each problem caused by substance abuse is often inadequate to capture the distinctions required to shape effective local strategies. It is the Surveillance Network's desire that both citizens and agencies come to understand the full scope of problems associated with substance abuse and not only the problems plaguing "their" organization and/or community.

The National Institute of Drug Abuse's Community Epidemiology Work Group (NIDA-CEWG) developed the model Substance Abuse Surveillance Network to generate information that would help communities address the wide range of problems caused by substance abuse. This report builds on the Durham County 2007 report [62].

What are Surveillance Networks?

The National Institute on Drug Abuse defines a surveillance network as follows:

"Community Epidemiology Surveillance Networks are multi-agency work groups with a public-health orientation which study the spread, growth, or development of drug abuse and related problems. The networks have a common goal - the elimination or reduction of drug abuse and its related consequences"[2].

The network creates a resource sharing system for different kinds of groups, including but not limited to: public health officials, law enforcement agencies, hospitals, and schools. It could include businesses, churches, and other civic organizations. This information can be supplemented with the results of local household surveys that provide community estimates of specific behaviors among subpopulations. Representatives from all respective agencies meet regularly to discuss data implications and create a standard template for data reporting.

After completing the report from accumulated data, the team disseminates the results to vast audiences. In order to disseminate the results to the maximum number of stakeholders, the results should be distributed frequently in a format that is easily understandable. This includes providing both quantitative and qualitative information.

Surveillance networks have long been used by major cities in the United States such as Boston, and New York to name a few(3). These networks are able to identify current patterns of drug abuse and identify emerging trends such as a new (or revival of an old) drug to a community.

The network's objectives are designed to focus on problems specific to a particular area. NIDA lists the following objectives in their model description:

- 1) Identify drug abuse patterns in specific geographic areas;
- 2) Identify changes in drug abuse patterns with the aim of finding patterns and trends over time;
- 3) Detect emerging substance abuse trends and consequences for the community; and
- 4) Distribute all acquired information to as many bodies as possible for policy use, research, general public knowledge, and prevention strategies.

The Benefits of Surveillance Networks

Substance abuse is a dynamic problem. Over time, changes occur in the types of substances, the populations most affected by different drugs, and the locations where the drugs are bought and sold. Thus, in order to use community resources efficiently, it is important to identify the "problem" as precisely as possible and then choose the appropriate intervention strategy for the community. Surveillance networks are designed to help communities target resources as efficiently as possible.

Surveillance networks are particularly efficient at identifying trends early as the problem emerges. With substances, early detection is imperative because addiction and dependency spread rapidly with time, furthering associated problems (health, crime, etc.). Early detection helps all sectors mobilize resources for prevention and allows treatment professionals, law enforcement, and medical professionals to get a better idea about the kinds of problems they are likely to face.

The other advantages of a network go beyond simply providing accurate data. For the most part, they are inexpensive and self-sustaining. A few committed members from each organization can easily gather data for comparison and analysis. In addition, most network members are likely to be already engaged in prevention. Therefore, the network exposes members to more perspectives, information, and immediate feedback about changes that may be occurring.

As new members are added to the network, the community gains additional information. At the local level, sharing information across agencies allows for trends to be identified

early and appropriate strategies to be developed in a timely fashion. On a broader level, networks can share information with other communities, such as effective interventions and strategies. For example, if a network established in Pleasantville had successfully halted the introduction of drug x into its community, that approach becomes a case study when that drug is identified as an issue in Durham or other surrounding counties.

In summary, surveillance networks are inexpensive, efficient, and accurate. The initial implementation requires little, aside from a place to meet and community members' time. Networks help identify problems that are endemic to a particular area and, in turn, provide exactly the form of data that are needed to address a problem as complex as drug and substance abuse.

Understanding the Community and the Community's Needs

The next section of the report begins with a description of the demographics of Durham County.

Following a description of who lives in Durham, the report proceeds by examining the various health-related dataset that demonstrate how the community is affected. These include emergency department visits, deaths reported by the state medical examiner, HIV and injection drug use.

The next section of the report focuses on data provided by law enforcement agencies. This includes calls to police for domestic violence cases, arrests related to possession and sales of illicit substances, as well as liquor law violations and drunk driving, substance use among adjudicated youth, and arrests on public middle and high school and college campuses.

The next section discusses the prevalence of alcohol as well as some of the harms most directly associated with drinking, such as deaths related to drinking and driving in Durham County. Much of the information regarding prevalence of heavy drinking comes from the Behavioral Risk Factor Surveillance Survey.

The following section focuses on the prevalence of smoking and use of tobacco products and the associated harms.

The next section focuses on the prevalence of substance-related behaviors among middle and high school students. This information comes from the Youth Risk Behavior Survey.

The next section focuses on services that are available for Durham residents. This information provides some insight into those needing substance abuse treatment.

Unlike the 2007 report, this report includes a section that describes the supply of drugs in Durham County. The U.S. Office of National Drug Control Policy considers Durham County to be part of the Atlanta High Intensity Drug Trafficking Area. This section provides insight from federal agencies that are conducting surveillance on what drugs are flowing through the community.

Demographics of Durham County

Understanding the demographics of a community is helpful for understanding the population needs. This information can be helpful in planning prevention and services.

According to the 2000 U.S. Census, the estimated population of Durham County in 2008 was 262,715(4). Children under the age of 18 account for 24.6 percent of Durham's population (vs. 24.3 percent in North Carolina), while those over the age of 65 account for 9.3 percent (vs. 12.4 percent in North Carolina)(5).

Durham is particularly diverse when compared to North Carolina as a whole. According to projections of the 2000 Census, in 2008 half of Durham was White (56.6 percent), relative to 73.9 percent of North Carolina. Durham is 37.2 percent African-American, relative to 21.6 percent of the state. 12.3 percent of Durham's population is of Hispanic or Latino origin, compared to 7.4 percent in North Carolina. 4.4 percent of the population is Asian, relative to 1.9 percent in the state(5). Moreover, in 2000 10.9 percent of people in Durham reported being foreign born which is more than double the statewide figure of 5.3 percent(5).

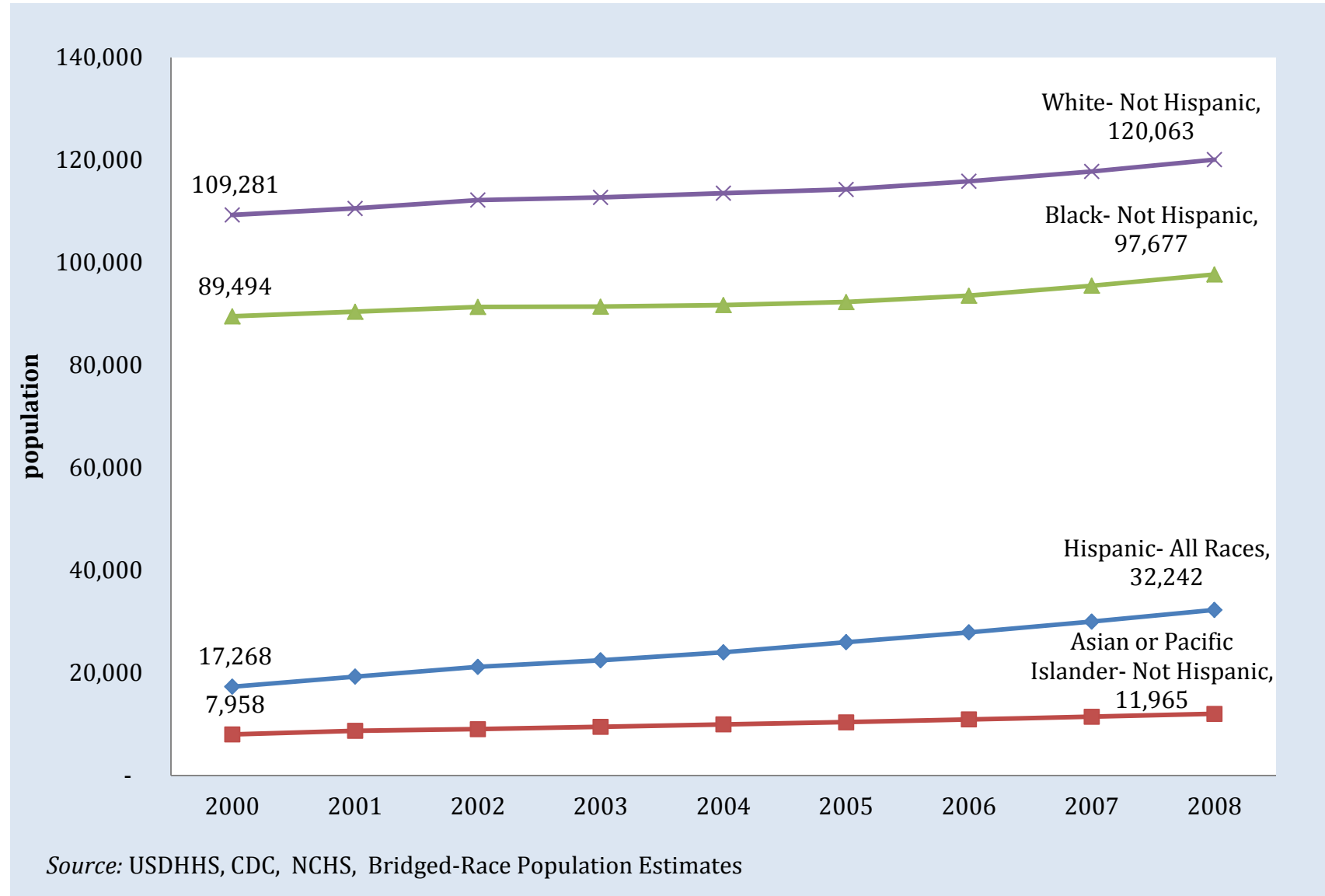
From 2000 to 2008, projections from the 2000 Census suggest that the population of Durham County grew by about 17 percent. While the total population in each of the racial and ethnic populations has increased, the growth in the Hispanic population has outpaced other groups, increasing from 8 percent to 12 percent(4). Figure 1 shows how the population of Durham County has grown from 2000 to 2008.

Durham is generally better educated and slightly wealthier than the rest of the state. A larger percent of Durham residents over the age of 25 have a Bachelor's degree (40.1 percent relative to 22.5percent for the state), and slightly fewer have not completed high school (17percent relative to 21.9percent for the state)(4). While the median income in Durham is above the state average, the percent of Durham residents living in poverty is also slightly above the state average (13.8percent vs. 14.6percent)(5).

Scope of the Problem in Durham County

An estimated 18,064 adults and 1,476 adolescents residing in Durham County abuse substances and need treatment[56].

Figure 1. Durham County population growth by race/ethnicity, 2000 - 2008



Tracking the Problem

Health-related Outcomes

Emergency Department Visits

Indicators:

- Number of emergency department visits related to substance use
- Rate of emergency department visits per 10,000 individuals

Relevance: Emergency department visits are a good indicator of health crises that are caused by substance abuse. Most people will try to avoid going to the emergency department for drug-related issues because of the illegality of the substance use or because of the cost of the service. Thus, typically only severe cases are seen. A sharp change in emergency department visits can indicate that a new substance has been introduced into a community (and thus many people are trying it) or the purity of a substance has changed (and experienced users are taking potentially life threatening doses of the substance).

Data: The data come from the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). This tool is designed to provide timely statewide detection of public health events. Hospitals report information daily to the system to allow for early detection of potential epidemics or public health concerns.

Hospitals started to participate in the program at different times. Below we list when various hospitals located in Durham began participating:

- Duke Hospital 10/31/2007
- Durham Regional 12/31/2005

NC Detect has made data available through two mechanisms. Data have been provided directly to the Center for Child and Family Policy on an annual basis by age (under 18, over 18 and total) for the substance abuse Web site

<http://substanceabuse.ssri.duke.edu/subabuse/index.php>. In addition, quarterly reports are prepared by the Quality Management Team Community Policy Management Section of the Division of Mental Health, Developmental Disabilities and Substance Abuse Services. These reports are made available to the LMEs.

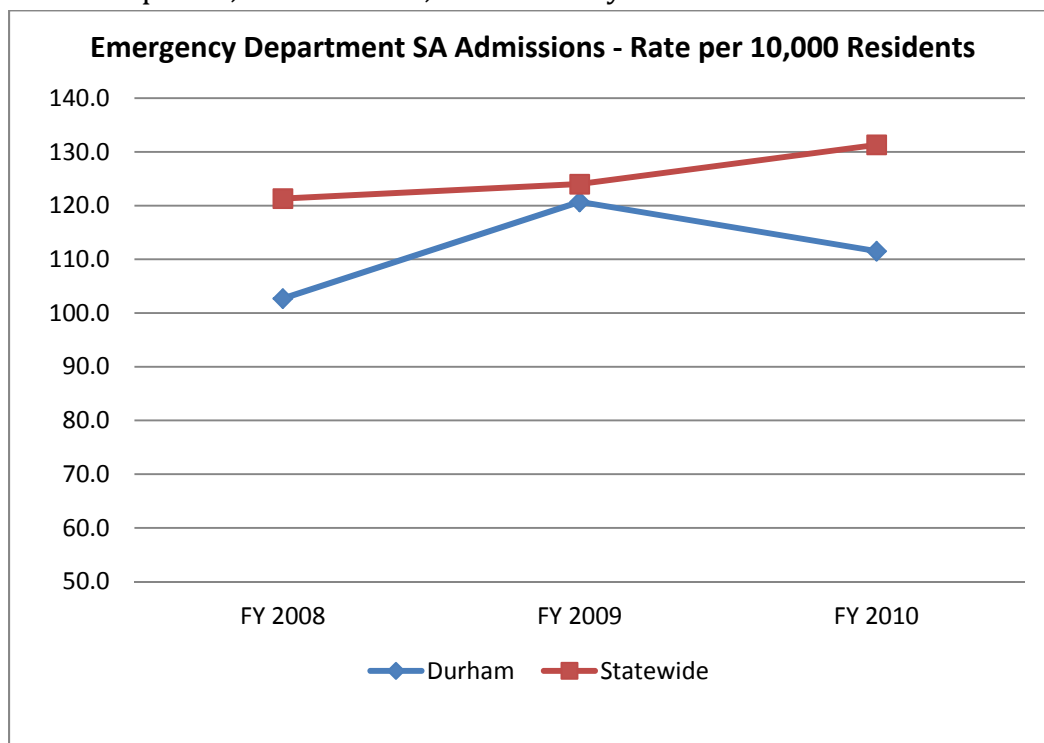
Findings: Table 1 provides the partial information that is available for 2008 and 2009. There was approximately 7% more hospital admissions related to substance use in 2009 relative to 2008. While the number of admissions increased in 2009, the rate of admissions, per 10,000 population, decreased by 2010. Figure 2 provides information on emergency room admissions from State Fiscal Years 2008 - 2010.

Table 1. Number of substance use related admissions to Durham County emergency departments, 2008 - 2009

Year	All Ages	Under 18	Over 18
2008	3152	69	3083
2009	3385	76	3309

Source: Data provided by NC DETECT
Note: There are two hospitals in Durham: Durham Regional and Duke Hospital. Duke Hospital did not provide data until October 31, 2007.

Figure 2. Rate of total admissions to the Durham County emergency departments related to substance use per 10,000 residents, State Fiscal years 2008 - 2010:



Deaths Reported by the NC Office of the Chief Medical Examiner

Indicators:

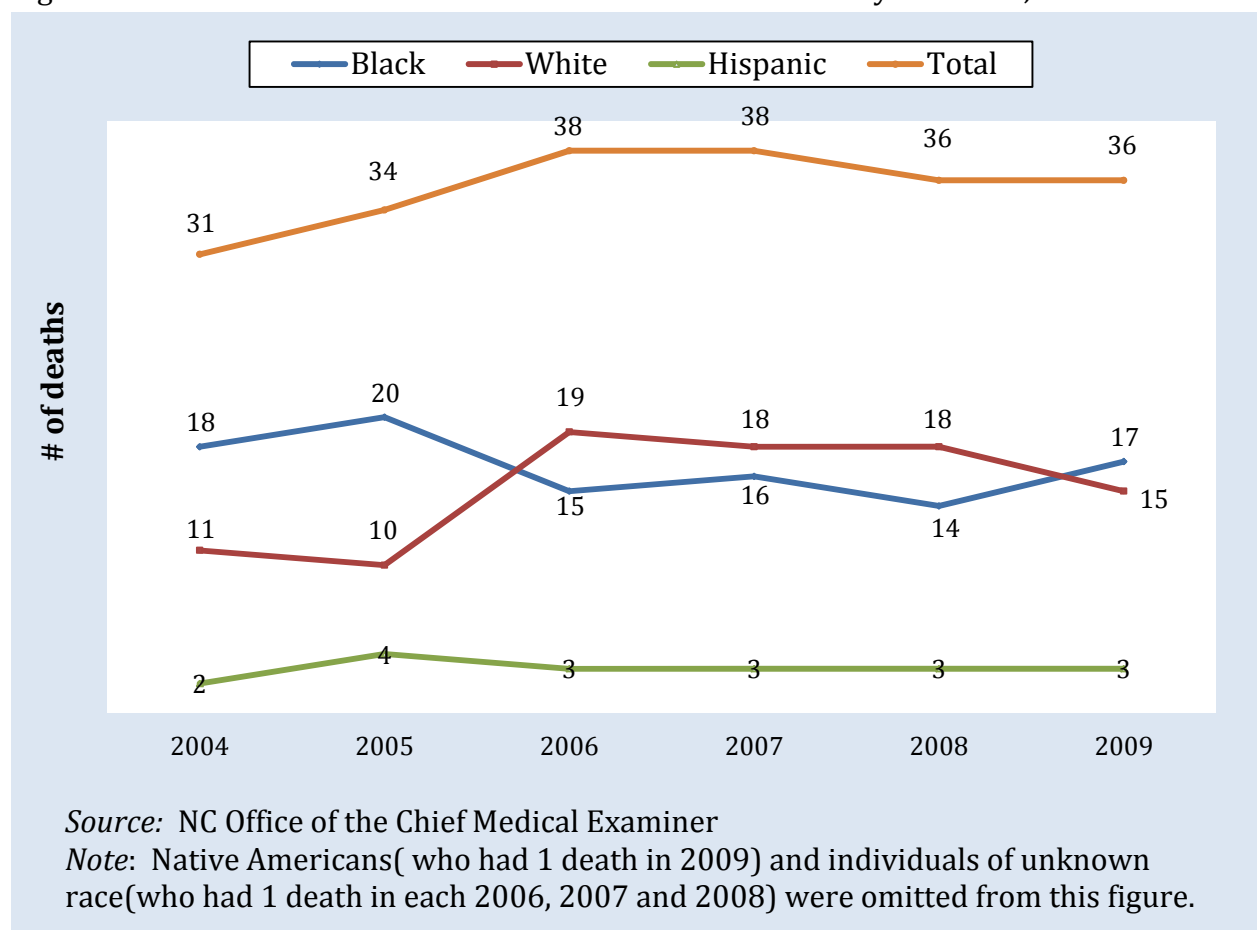
- Number of deaths identified by the NC Office of the Chief Medical Examiner (NC CME)
- Number and percent of toxin-related deaths by type of substance

Relevance: Deaths examined by the medical examiner provide insight into the types of drugs that individuals are abusing. Changes in the number of substance use-related deaths in a community are most likely when a drug is first introduced into a community or when there is a change in the purity of a drug that is commonly used. Deaths from the medical examiner give us a sense of the demographics of populations most at risk as well as the types of dangerous drugs that are in the community.

Data: Data were provided by the NC Office of the Chief Medical Examiner. Please note that ten deaths related to Carbon Monoxide poisoning were omitted. Individuals include Durham County residents; however, the death may have occurred in another county. Although race and ethnicity are not mutually exclusive (that is, someone can be both White and Hispanic or Black and Hispanic), in these data, there was no one who had Hispanic ethnicity that had a race listed.

Findings: Figure 3 examines the number of toxin-related deaths to Durham County residents from 2004-2009. Across all six years, about 47 percent of deaths are African Americans, 43 percent Whites, 8 percent Hispanics, and less than 1 percent to Native Americans and individuals of unknown race/ethnic origin. Although the numbers fluctuate some from year to year, there is not strong upward or downward trend.

Figure 3. Number of deaths related to toxins for Durham County residents, 2004-2009



Across the six years, males constituted 75 percent of deaths from toxins and females 25 percent.

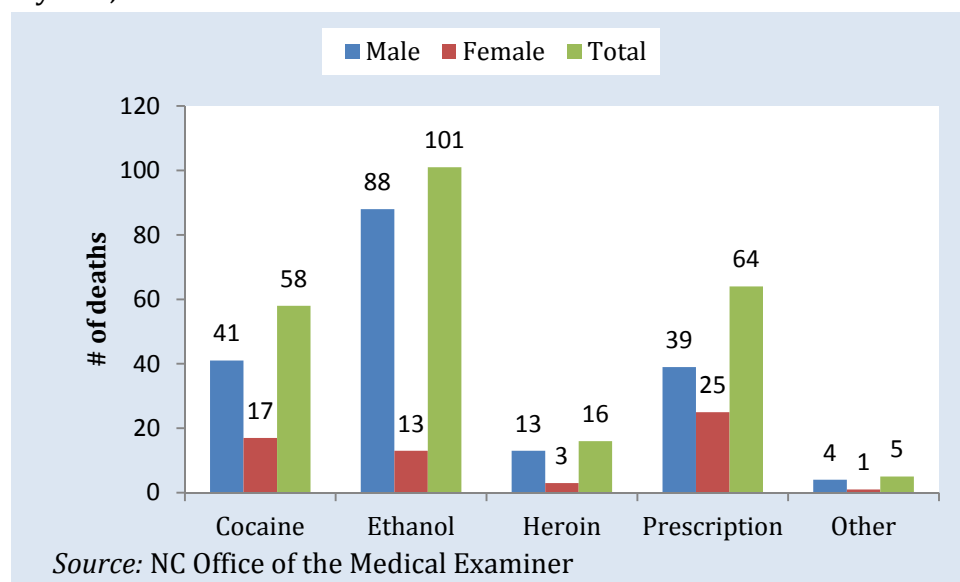
The NC Office of the Chief Medical Examiner lists toxins that are either the primary or a contributing factor in the individual's death. The drugs were coded into the following five categories: alcohol, prescription drugs¹, cocaine, heroin, and other. Figure 4 provides insight into the relative contributions of various substances that have been the primary or contributing cause of death for Durham residents. Alcohol was the most frequently mentioned toxin in 47 percent of Durham resident toxin-related deaths. Alcohol was followed by prescription drugs (30 percent), cocaine (27 percent), heroin (8 percent), and

¹ The following drugs were coded as prescription drugs: Alprazolam, Amitriptyline, Amlodipine, Citalopram, Clonazepam, Codeine, Diazepam, Diphenhydramine, Fentanyl, Hydrocodone, Methadone, Metoprolol, Morphine, Oxycodone, Oxymorphone, Paroxetine, Pentobarbital, Phenobarbital, Promethazine, Propofol, Quetiapine, Sertraline, Tramadol and Trazodone.

other (2%). Please note that multiple drugs may be listed in a single death so the total will not necessarily be 100 percent.

The substances associated with deaths differed for males and females. Alcohol was observed in 55 percent of male deaths related to toxins, relative to only 25 percent of female deaths. Conversely, prescription drugs were noted in 47 percent of female toxin-related deaths, but only 24 percent of male toxin-related deaths (however, because males had more toxin-related deaths than females, more males had prescription drugs listed as a factor in their death than females). The proportion of deaths with Cocaine or Heroin listed as a factor were similar for males and females.

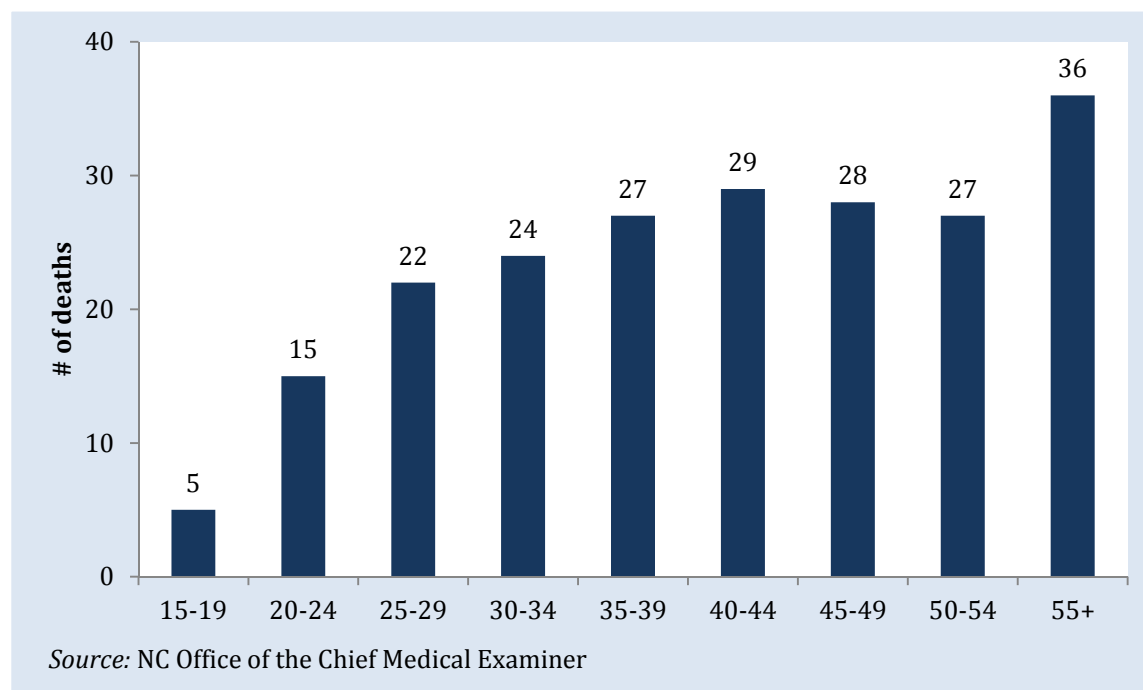
Figure 4. Drugs mentioned in deaths involving toxins for Durham County residents during 6 years, 2004-2009



Age is an important factor to consider when understanding how substance use is affecting the community. Figure 6 examines toxin-related deaths by age for Durham residents. The figure demonstrates that toxin-related deaths have been spread across age groups over the last six years.

Data from the *2007 Substance Use and Abuse Report* [62] indicated that individuals ages 35 – 39 were at the greatest risk of dying due to substances. However, when the data are calculated over five years, it appears that more toxin-related deaths occur in older individuals (ages 55+).

Figure 5: Deaths related to toxins by age for Durham County residents during 6 years, 2004-2009



The NC Office of the Chief Medical Examiner identifies the manner in which the individual died. Across 2004-2009, of the 213 deaths related to toxins, 140 were accidental (66 percent), 24 were suicides (11 percent), 23 were natural deaths (11 percent), 20 were homicides (9 percent), and 6 were undetermined (3 percent). For Blacks, Whites, and Hispanics, accidental deaths were more frequent than the other manners combined. More Blacks died as a result of a homicide (13) than individuals of the other racial and ethnic groups (2 White, 3 Hispanic, and 2 individuals of unknown racial and ethnic background). More Whites died as a result of suicide (18) than Black (4 deaths) or Hispanic (2 deaths) individuals.

HIV and Injection Drug Use

Indicators:

- The number of new HIV cases related to injecting substances (or MSM/IDU)

Relevance: Across the United States, approximately 20 to 30 percent of new HIV cases are related to substance abuse(6, 7). In 2006, 16 percent of new cases of HIV infection were in injection drug users (IDUs)(8).

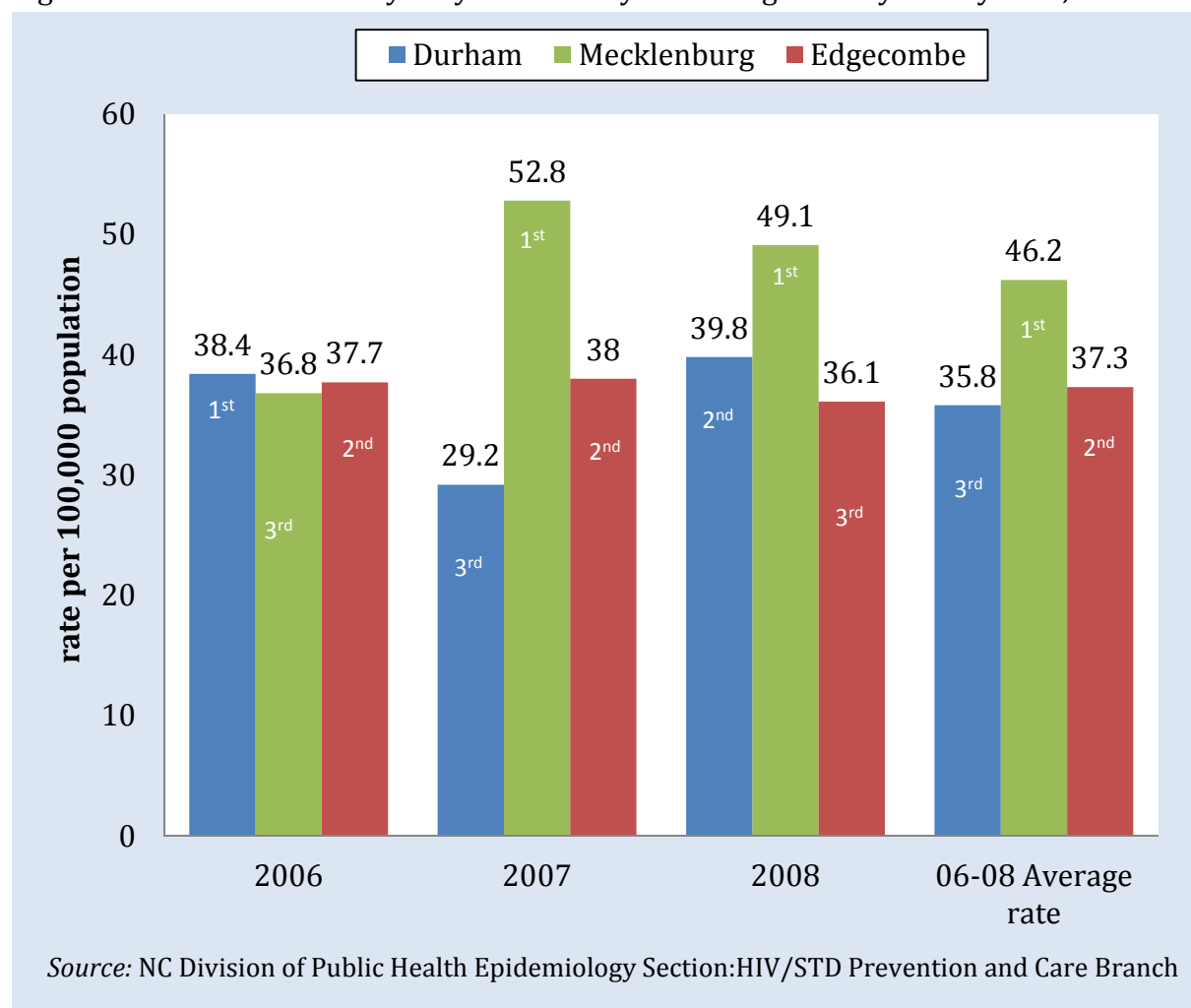
HIV rates in Durham County have been alarming for well over the past decade. Durham County has a high rate of HIV when compared to other counties in North Carolina(9).

Across North Carolina between 2006 and 2008, the rate of newly diagnosed HIV infections was 21.0 cases per 100,000 people. For Durham it was 35.8 cases per 100,000 people(10).

In fact, Durham County had the third highest HIV infection rate among North Carolina counties for the years 2006-2008. Mecklenburg and Edgecombe were the only counties with higher rates (see Figure 6)(10).

Since 2002, Durham County has consistently ranked in the top four counties with the highest HIV rates(11).

Figure 6: HIV new infection yearly rate and 3 year average rate by county rank, 2006-2008



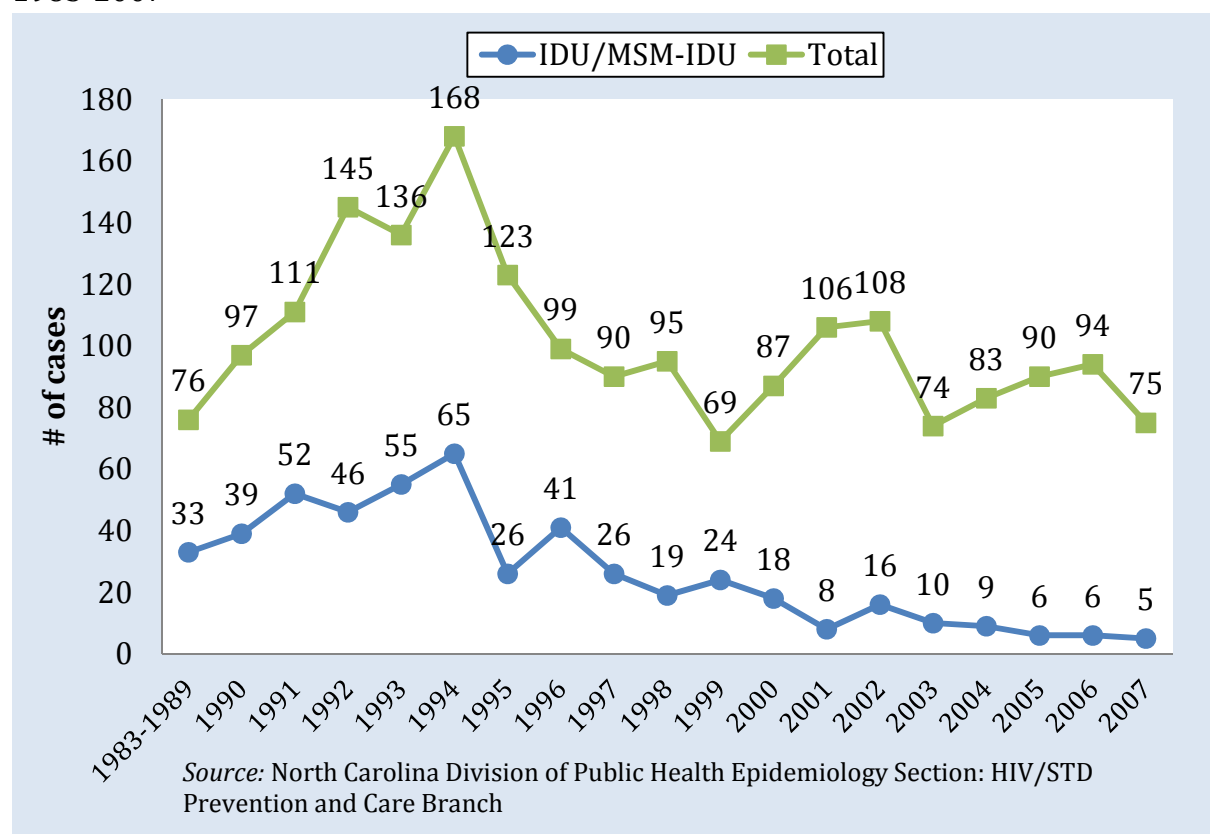
HIV/AIDS is a major threat and is a leading cause of death for Durham residents. The 2004-2008 age-adjusted death rate from HIV/AIDS was 7.3 deaths per 100,000 population in Durham and 4.4 deaths per 100,000 population for the state of North Carolina(12). This is almost twice the state rate. During the years 2000-2004, HIV was the fifth leading cause of

death among Durham residents aged 20-39 and the fourth leading cause of death among individuals aged 40-64(13). However, from 2004 to 2008, HIV dropped to the seventh leading cause of death among Durham residents aged 20-39 and the sixth leading cause of death among individuals aged 40-64(14). So while overall HIV remains a major problem in Durham County and HIV diagnosis rates are not changing, deaths due to HIV are decreasing.

Data: Data on HIV and AIDS incidence and rates in Durham County come from the HIV/STD Prevention and Care Epidemiology Division in the North Carolina Public Health Department. In the 2008 HIV/STD Surveillance Report, HIV and AIDS data are presented differently than in previous years. Therefore, for this report, we only include data from the 2008 report, as it is not appropriate to compare data from previous reports. For further information and guidance, consult the Technical Notes section of the 2008 report. Durham County HIV Disease Cases by mode of transmission, race/ethnicity, gender, and age for years 2000-2008 were prepared by Jason Maxwell, Statistical Research Assistant at the Communicable Disease Branch at the NC Division of Public Health.

Findings: Progress has been made in Durham to lower the number of newly acquired HIV cases related to substance use. Figure 7 shows the total number of newly reported cases of HIV by year(15, 16). The North Carolina public health department tracks newly reported cases by how the disease was acquired (men having sex with men (MSM), injection drug use (IDU), blood products, pediatric cases, no identified risk (NIR)). Some men who have sex with men also engage in injection drug use. For the purposes of the numbers presented below, MSM/IDU and IDU were combined. During the years 1983-1994, 40 percent of newly reported HIV cases were related to injection drug use, relative to 9 percent for 2000-2005. During the years 2005 to 2007, this went down again to 6.7 percent, 6.4 percent, and 6.7 percent. In addition, the total number of HIV cases per year related to substance use has decreased. During the years 1995-1999, there were approximately 27 new cases each year, relative to 10 cases per year during 2000-2007. In addition, since 2004, there have been less than 10 cases per year being reported as due to IDU. Though this is a decrease from the 2004 HIV reports, it is important to note that, on average, one-third of new HIV cases do not have an identified mode of transmission(9).

Figure 7: Number of new HIV cases by year and mode of exposure in Durham County, 1983-2007



HIV and Injection Drug Use by Gender

In Durham, males are living with HIV at a greater rate than females. In 2008, the HIV rate (per 100,000) for males was 60 compared to 20.5 for females(16). According to the 2007 Regional HIV/STD Surveillance Tables **among individuals diagnosed with HIV from 2003-2007, injection drug use was the source of infection for approximately 9 percent of males and 7 percent of females in Durham County(17).** This is less than what is reported at the national level. However, due to errors in reporting method of transmission, and the low number of cases reported, this might not be a reflection of the true impact of IDU on HIV infection in males and females.

HIV by Race/Ethnicity and Injection Drug Use

African-Americans are disproportionately affected by HIV. The rate of new HIV infections per 100,000 people in 2008 was 10.2 for Whites, 52.6 for Hispanics, and 72.5 for African-Americans(16). While the rates are consistently higher in African-Americans, over time the rates in African-Americans seem to be declining.

Among North Carolinians in 2008 who recently tested positive for HIV, a larger percentage of White females (17 percent) than African-American females (8 percent) reported having used injection drugs. The same is true for males: a larger percentage of Whites (9 percent)

than African-Americans (4 percent) reported having used injection drugs(9). **However, there are no data available to analyze the racial and ethnic profile for HIV by cause of disease in Durham County.**

Substance Abuse and Social Services

Child Welfare: Child Maltreatment, Abuse and Neglect

Emerging Indicator:

- Number of Child Protective Services investigations where substance/alcohol abuse by a parent or child is a contributing factor

Relevance: Federal law defines child maltreatment as “any recent act or failure on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which presents an imminent risk of serious harm.” Children who are maltreated are at risk for a number of negative outcomes, including depression, aggression, and problems with socialization. Moreover, they may experience academic problems which in turn impact their lifelong earnings. In State Fiscal Year 09-10, Durham Department of Social Services (DSS) received 1,496 reports alleging abuse and/or neglect of a child. Of those reports, 26% (381 reports) were found to be unsubstantiated [63].

Parents who abuse substances are more likely to abuse or neglect their children(18). Neglect may arise because the parent is spending time seeking drugs or is incapacitated due to inebriation. Abuse may be more likely due to the specific effect of the drug on the parent’s decision making process. For example, common side effects of drugs like cocaine may include depression, hallucinations, and paranoia. These effects can last hours during the high or longer if they are the effects of withdrawal(19). Parents who have been investigated for child maltreatment may be at increased risk of losing parental rights (*see section on foster care*).

Data: In 2005, the North Carolina Department of Social Services began collecting information on whether substance/alcohol abuse was a contributing factor in investigations by child protection services.

Findings: Even though DSS has been collecting data on substance use as a contributing factor, it is not currently available to the public.

Limitations: When data becomes available, it will only provide information on children and family members who come into contact with child protection services. Many children

and families with substance abuse problems are not involved with social service agencies thus the problem tends to be underreported.

Child Welfare: Foster Care

Indicator:

- Number of children removed from their homes due to a) parent substance abuse, b) parental alcohol use, c) child substance abuse, and d) child alcohol use

Relevance: Foster care is often a last resort for child protective services. As a result, only small subsets of children who experience maltreatment are placed into foster care. Parental substance abuse places a child at risk for being removed from his or her home and having a longer length of stay once placed into foster care [64]. Parents who are working toward providing a more stable environment for their children after they have been placed into foster care face state mandates, as well as the challenge of fighting their addiction.

The 1997 Adoption and Safe Families Act states that parental rights are to be terminated if the youth has been in foster care for 15 of the last 22 months. Parents who are substance abusers and do not wish to have their parental rights terminated face special challenges. For instance, in many counties the foster care system and the treatment systems are not well coordinated; thus, parents may be responsible for finding their own treatment options. Many substance abusers are reluctant to initiate treatment and the course of treatment may take years before the person is fully recovered. Thus, parents who abuse substances may be more likely to lose custody of their children.

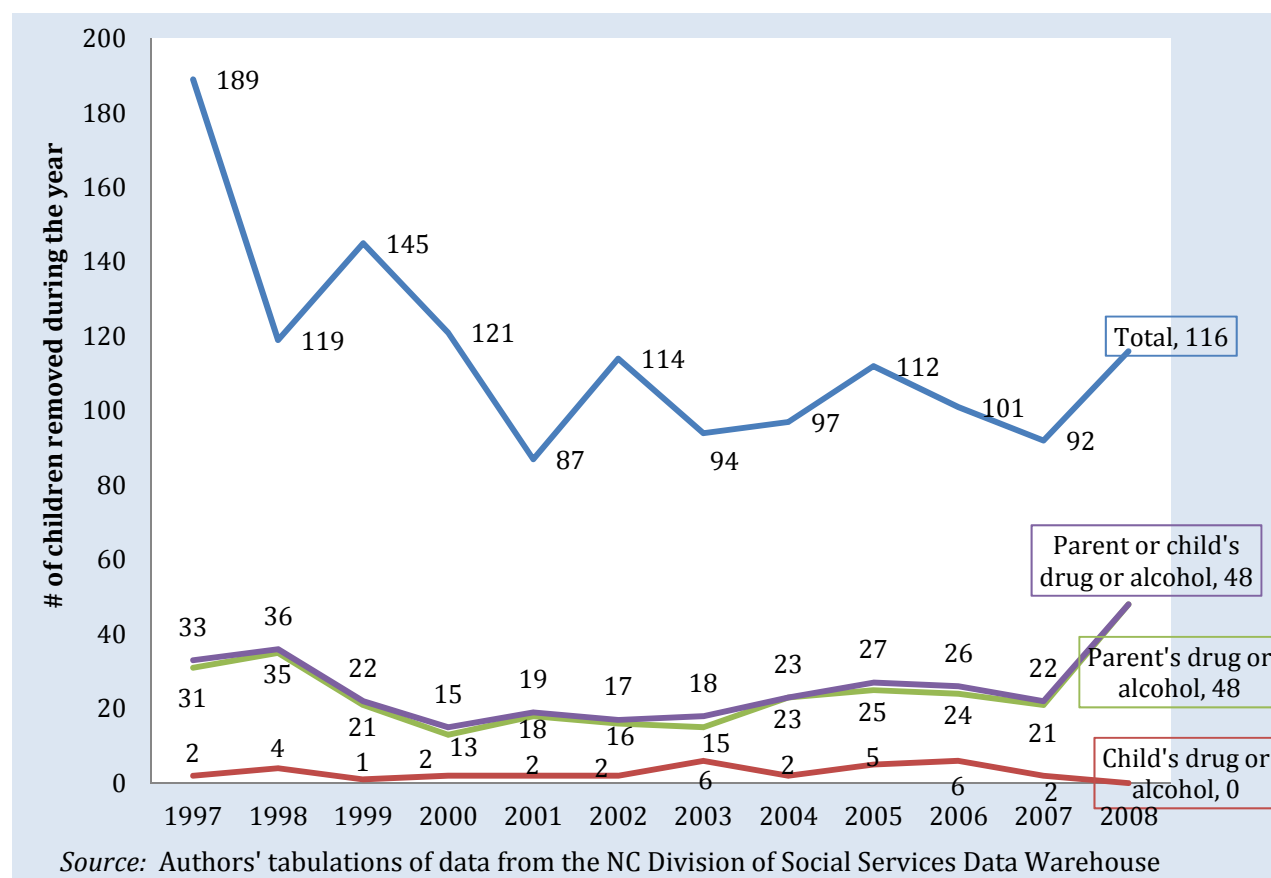
Data: The Department of Social Services tracks youth who have been removed from their homes and placed in kinship care or state custody by the reason that the youth was removed. As part of maltreatment and abuse, there are 4 categories related to alcohol and substance abuse which may contribute to a child being removed from home. These include parental substance abuse, parental alcohol abuse, child substance abuse, and child alcohol abuse. These data come from the North Carolina Division of Social Services Client Tracking System. The Center for Child and Family Policy is currently in the process of working with these data and creating unique identifiers for each child so that further analyses can examine what factors lead to better outcomes for youth. These numbers are preliminary and may be updated in future versions of this report.

It is worth noting that the Office of Management and Budget compiles numbers that include the number of foster care youth per county over time. The numbers from this source are higher because the numbers describe the total number of youth in placement on June 30 of that year whereas our numbers describe the number of youth who were placed in that year. Because some youth stay in placement for long periods of time the number of youth in placement at a point in time exceeds the number of youth placed in a given year.

Findings: From 2007 to 2008 the number of placements into foster care increased by 27% (from 92 to 116) (see figure 8). In 2008, the number of placements where alcohol or

substances was a primary or contributory factor was at its highest point during the 1997-2008 time period. In 2008, 48 youth were removed from home because the parent had abused alcohol or substances, 29% higher than the number who were removed in 2007 for the same year (21 youth). In general, the alcohol or substance use of the child is involved in only a small number of home removals (0-6 per year in Durham County). However, over this 12 year span, parental alcohol or substance use has been involved in about 24 home removals each year.

Figure 8. Placements into Foster Care in Durham County by reason/contributing factor for placement



Homelessness

Indicator:

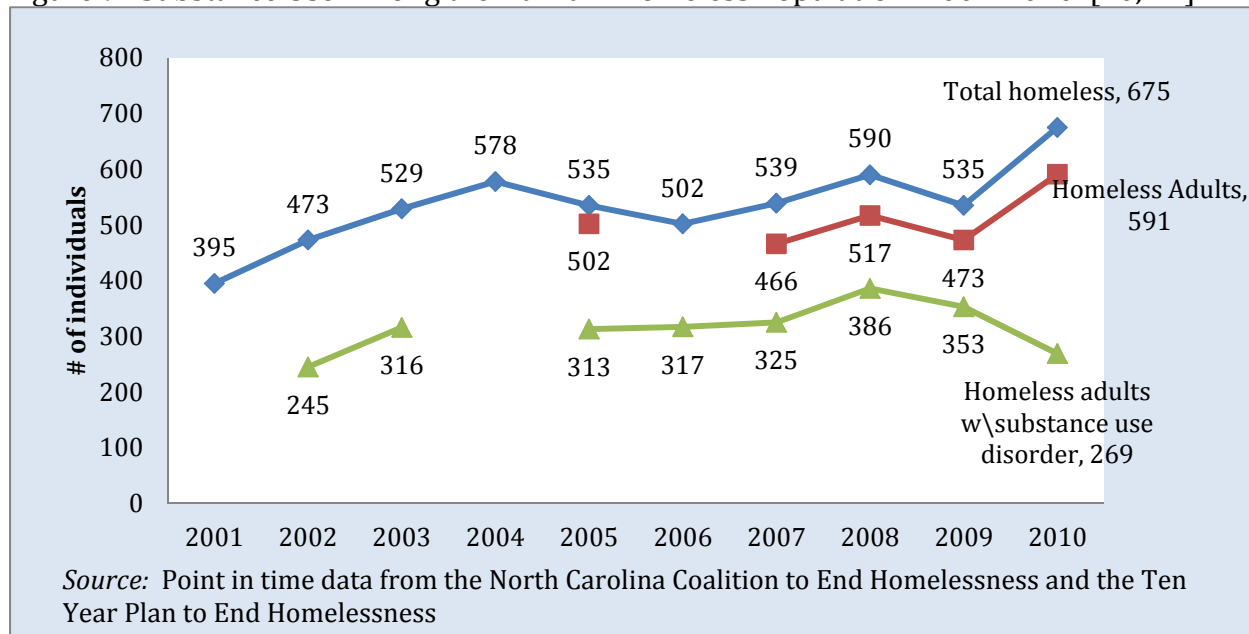
- Number of homeless individuals who are substance abusers

Relevance: Durham is involved in an ambitious plan to address homelessness. Knowing the changing substance abuse patterns among the homeless population is essential when planning to meet the treatment and housing needs of that population. Both treatment and enforcement planners will be able to use this information.

Data: Each year, the Durham Affordable Housing Coalition leads a concerted effort to count the homeless individuals in Durham County on a given day. This involves a) teams of individuals going out into the streets in the early hours of the morning to count homeless individuals (people living under viaducts and bridges, in the woods, in abandoned houses, etc.), and b) agencies that submit information regarding the number of homeless individuals receiving services for emergency relief and transitional shelter. For recent years, the data are available online through the North Carolina Coalition to End Homelessness and the 10 Year Results Plan to End Homelessness in Durham [20, 21]. Older data were made available by Lloyd Schmeidler. Please note that the different sources sometimes had slightly different counts.

Findings: The current year, 2010, marks the year with the highest number of homeless individuals in Durham with 675. This is 26% higher than the number of homeless in 2009. The number of individuals with a diagnosable substance use disorder dropped from 353 in 2009 to 269 in 2010. This is a 24% drop in the number of homeless individuals with substance use disorder [22]. See figure below.

Figure 9. Substance Use Among the Durham Homeless Population: 2001-2010 [20, 22]



Substance Abuse and Law Enforcement

Domestic Violence and the Durham Police Department

Indicator:

- The number and percent of domestic violence cases involving alcohol or illicit substances.

Relevance: It is estimated that, in the United States, one out of four women will be affected by domestic violence during their lifetime. In North Carolina in 2008 and 2009, 131 and 100 homicides were due to domestic violence. In Durham county in each 2008 and 2009 there were four homicides related to domestic violence [23].

Domestic violence is defined as the willful abusive behavior resulting in assault or battery against an intimate partner. For some individuals, the use of alcohol and drugs promotes aggression and impulsive behaviors. Substance abuse may result in the batterer misinterpreting a comment or action from a spouse or child, leading to outbursts and lashing out [24]. Together, these side effects of alcohol and drug use may increase the likelihood of domestic violence.

Data: Data were provided via personal communication April 2010 by the Durham City Police Department. In 2004, the Durham Police Department began tracking the number of calls to service for domestic violence cases. In 2005, they began to track detailed information on the calls that they responded to in order to identify repeat offenders. Beginning in 2006, the police began tracking whether the alcohol or substance user was the suspect or the victim.

Findings: From 2004-2009, the Durham Police Department has averaged about 1,800 calls to service for domestic violence each year. Figure 10 summarizes how substance use has been involved in these cases. In approximately one third of these cases, the suspect has abused alcohol or an illicit substance and about 12 percent have involved substance use of the victim.

Children are particularly vulnerable in situations involving domestic violence, substance use, or both. The police may need to work with social services if they suspect that the child may be harmed. From 2005-2009, approximately 22 percent of calls to service involved children and 9 percent of the calls for domestic violence involved both children and substance use.

Between 2006 and 2009, of the 6,984 case investigated by the Durham Police Department, a child was present in 1,544 cases (22 percent of all cases investigated) (see Figure 11). Of these, 635 cases had substance abuse reported in either the victim or suspect (9 percent of

all cases reported, and 41 percent of cases where a child was present). Among the domestic violence calls where a child was present (22 percent), 41 percent involved substance use of either the suspect or the victim.

Figure 10. Number of calls to service for the Durham Police Department for domestic violence cases, by type, 2004-2009

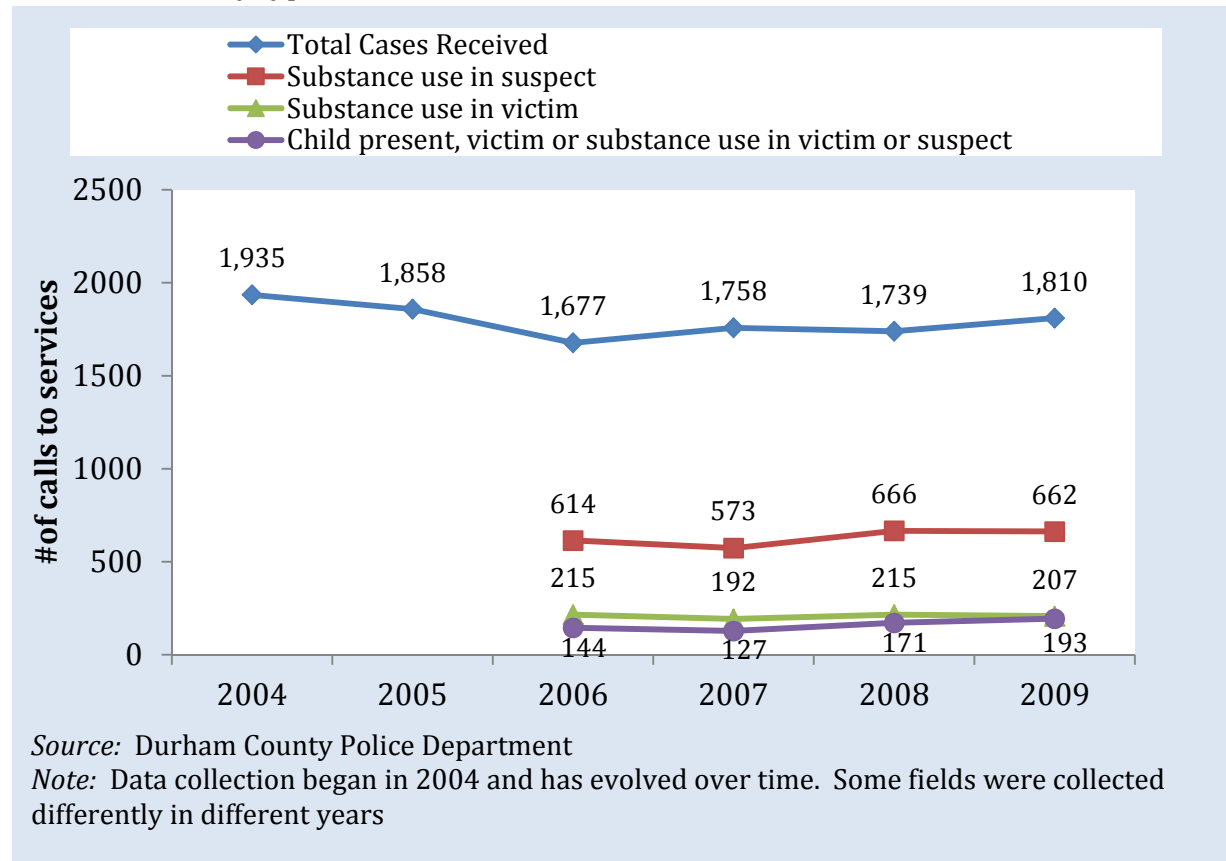
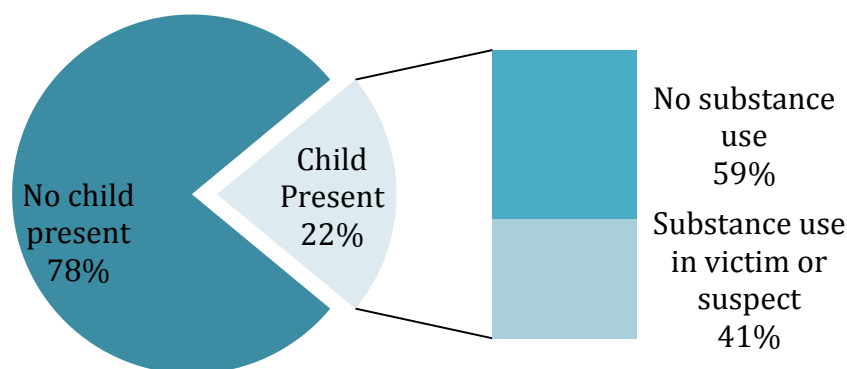


Figure 11. Durham County Police Department calls to service for domestic violence by presence of children and substance use (n=6,984), 2006-2009



Source: Durham Police Department

Arrests in Durham County Related to Alcohol and Illicit Substances

Indicators:

- Number/rate of arrests for possession and sales of illicit substances.
- Number/rate of arrests for liquor law violations.
- Number/rate of arrests for driving under the influence.

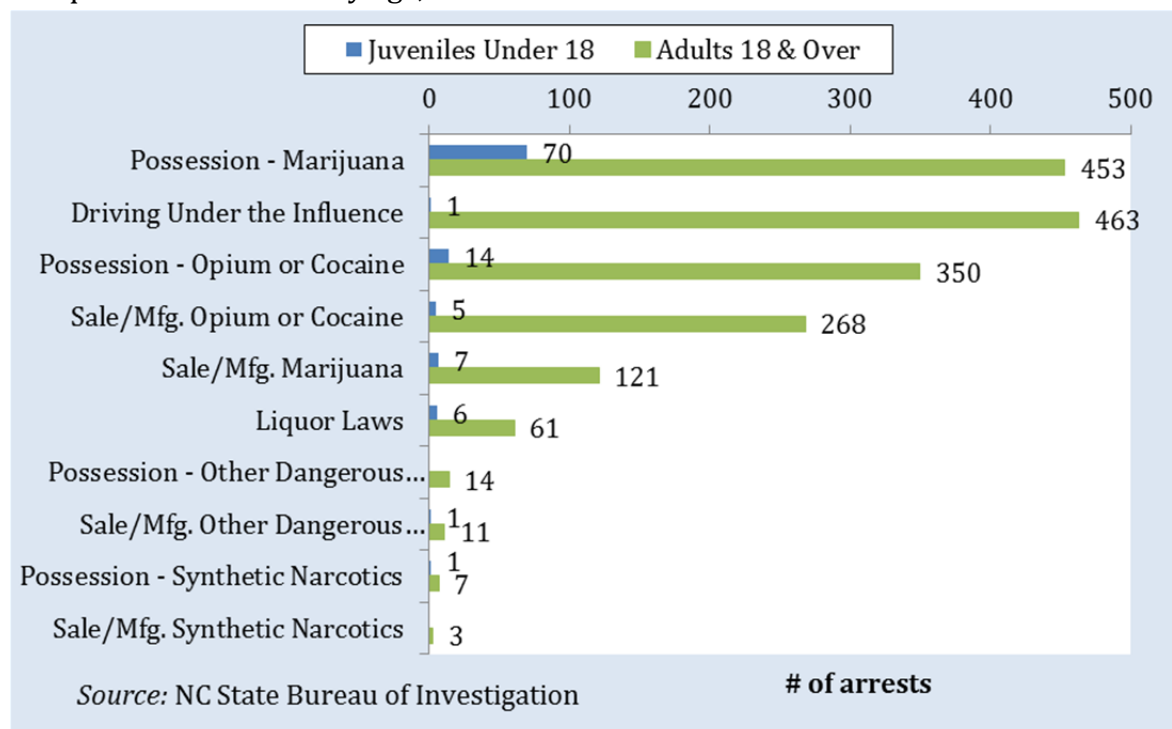
Relevance: Arrests related to alcohol and illicit substances provide a sense of the various illegal behaviors related to substances. It is important to note that the number of arrests may fluctuate based on real changes to the number of violations being committed as well as the resources that are devoted to policing a particular issue. In order to make the best use of information from arrests, it is best to have qualitative information from local law enforcement agents who can help explain if policing strategies have varied during the time frame of observation or if there are real changes occurring in the number of violations being committed.

Data: Data are provided by the State Bureau of Investigation. Local law enforcement agencies voluntarily report information. Data are available online from the NC Department of Justice, from the North Carolina Uniform Crime Reporting (UCR) Program [25]. Arrests related to substance use include possession or sales/manufacturing of a) marijuana, b) opium or cocaine, c) synthetic narcotics, and d) other dangerous drugs – as well as driving under the influence and liquor law violations.

Findings: In Durham County in 2009, possession of marijuana (70 arrests) was the primary reason youth under the age of 18 were arrested for violations related to substance use. Possession of opium or cocaine (14 arrests), sales/manufacturing of marijuana (7

arrests), liquor law violations (6 arrests), and sales/manufacturing of cocaine (5 arrests) followed a distant second to marijuana charges (see Figure 12). For adults in Durham County in 2009, the largest substance use-related reason for arrest was drinking and driving (463 arrests), which was closely followed by possession of marijuana (453 arrests). There were also a relatively large number of arrests for possession of opium or cocaine (350 arrests), sales/manufacturing of opium or cocaine (268 arrests), and sales/manufacturing of marijuana (121 arrests).

Figure 12. Arrests for possession or sales of illicit substances, driving under the influence, or liquor law violations by age, 2009



Arrests for possession and sales of illicit substances over time

Overall, the time trends in arrests for different substances are difficult to determine because it appears that the data on arrests related to substances may have been inaccurately or incompletely reported in 2006. It appears that, on average, there have been fewer arrests for sales of opium or cocaine during 2007, 2008, and 2009 (406) relative to 2003, 2004, and 2005 (472) (see figure 13). Similar to the pattern observed in sales, arrests for possession of opium or cocaine was less in 2007-2009 relative to 2003-2005 (393 vs. 381) (see figure 18).

While arrests for sales/manufacturing and possession of opium and cocaine appears to be down, the story differs for marijuana sales. Arrests for sales/manufacturing were slightly

higher in 2007-2009 than 2003-2005 (119 vs. 110). Similarly, arrests for possession of marijuana averaged higher during the later years from 468 to 509.

Figure 13. Arrests for sale of drugs in Durham County, 1995-2009

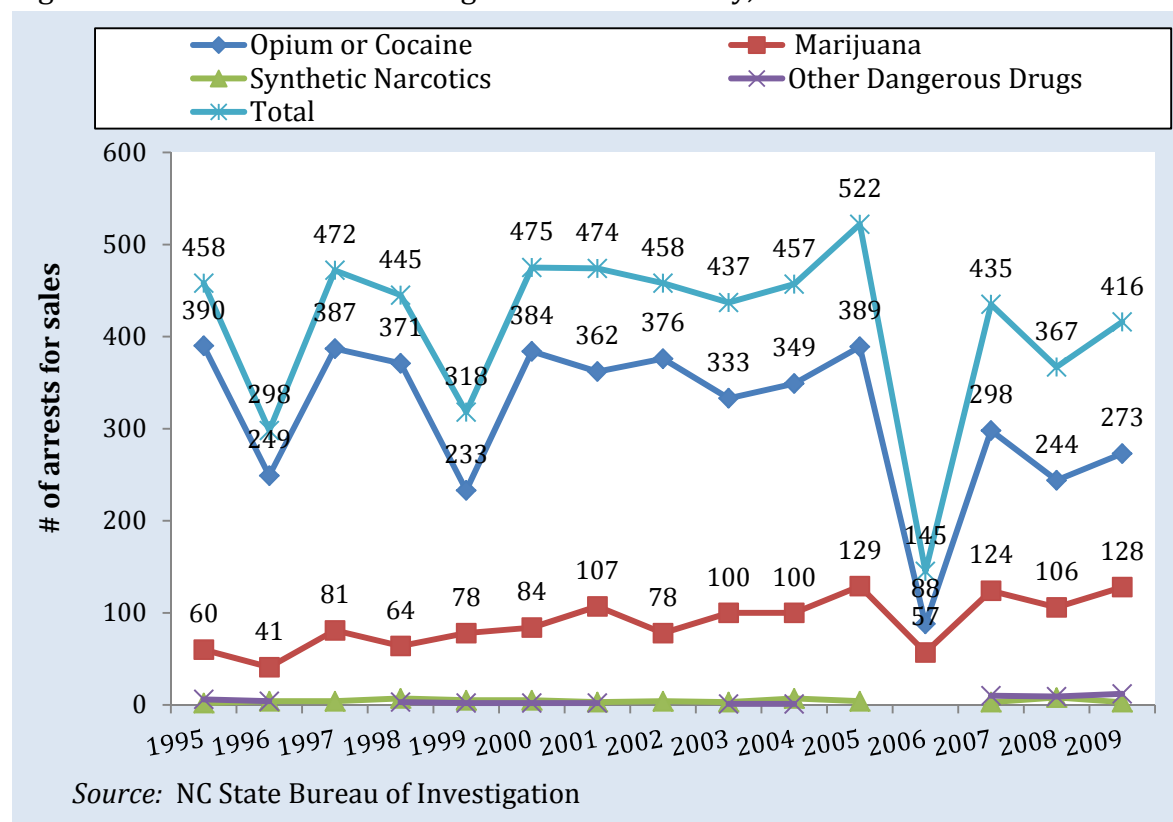
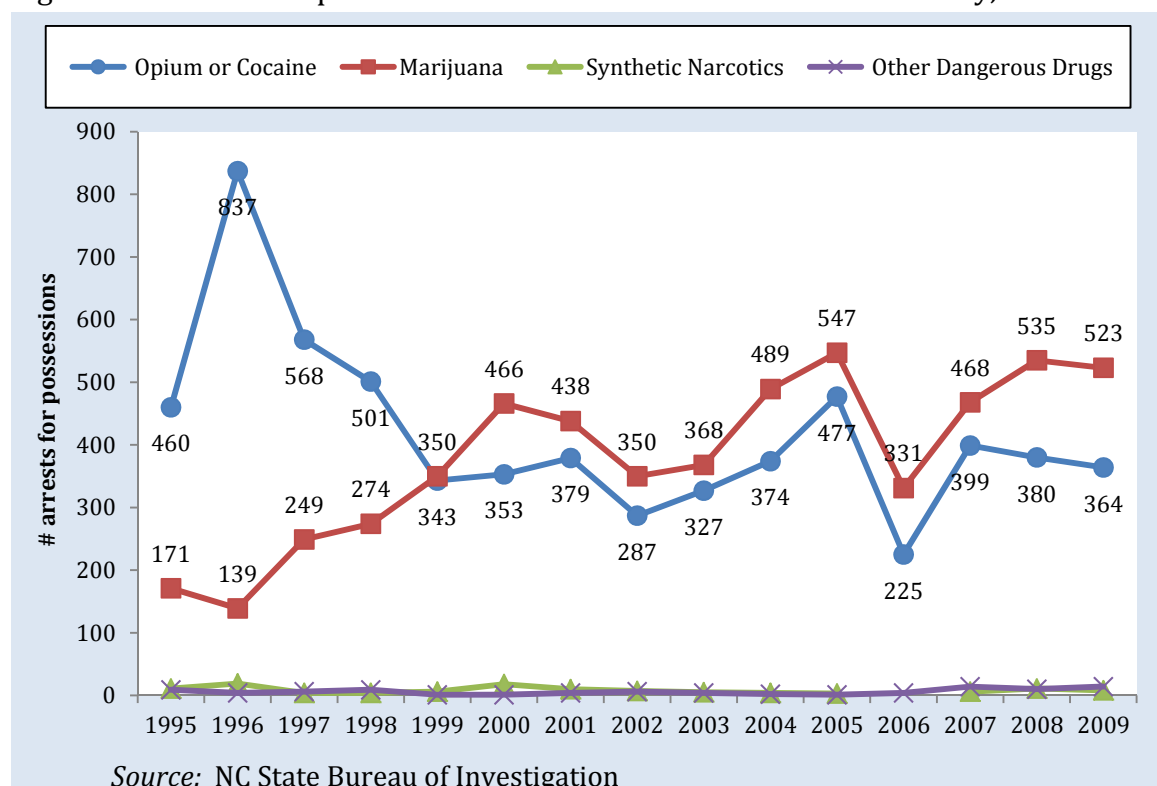


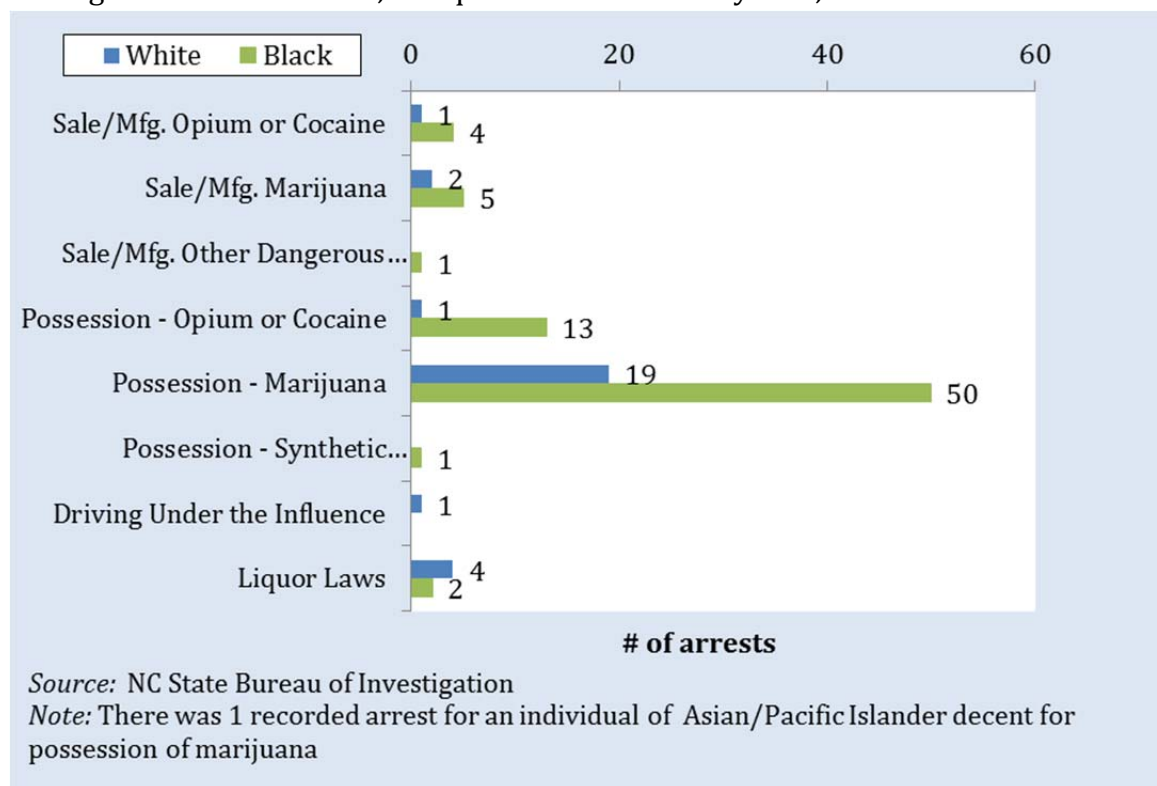
Figure 14. Arrests for possession of illicit substances in Durham County, 1995-2009



Arrests among juveniles by race

Figure 15 shows arrests related to substance use in 2009 for juveniles in Durham by race. Except for liquor law violations, Black juveniles had a higher number of arrests than White juveniles. For example, relative to Whites, Black juveniles had a higher number of arrests for possession of marijuana (50 vs. 19), possession of opium or cocaine (13 vs. 1), sales/manufacturing of marijuana (5 vs. 2) and sales/manufacturing of opium or cocaine (4 vs. 1).

Figure 15. Arrests in Durham County of juveniles for possession or sale of illicit substances, driving under the influence, or liquor law violations by race, 2009



Substance Use Among Prison Inmates

Indicators:

- Number and percent of inmates entering prison that had a drug offense on commitment.
- Number of inmates entering prison whose most serious offense on commitment was drug-related.
- Number and percent of inmates entering prison with a need for substance use treatment.
- Drug of choice as identified by inmates.

Relevance: Prison inmates represent a portion of the population that tends to have high rates of substance use issues. For example, in 2004, according to a national sample, about 17-18 percent of state and federal inmates committed their current offense to obtain money for drugs [26]. Moreover, about a quarter to a third of convicted inmates stated that they had their most recent offense while under the influence of drugs. Most

importantly, over half of federal and state inmates reported being addicted to, or of having abused, drugs and alcohol.

The high needs of this population warrant the attention of the treatment community. Effective treatments offer hope of reducing recidivism as well as helping these members of our community return to a productive, independent life [27].

Data: The data come via personal communication May 2010 from the North Carolina Department of Corrections. Note that information may describe different populations. Individuals entering prison in a given year is a different population than inmates during the year. The latter includes individuals who have been incarcerated throughout the year.

Findings: In 2009, 659 Durham residents entered prison. One third of Durham residents that entered prison had at least one drug offense at time of conviction and a quarter had a drug offense as the most serious offense at the time of conviction (see table 2). Moreover, results of the Substance Abuse Subtle Screening Inventory (SASSI) indicated that 63 percent of Durham residents entering prison needed substance abuse treatment. Among Durham residents under the age of 18 who entered prison in 2009, none had an arrest related to substance use; however, 11 of the 12 were identified as needing substance use treatment.

Table 2. Prison entries and drug offenses among Durham residents, 2009

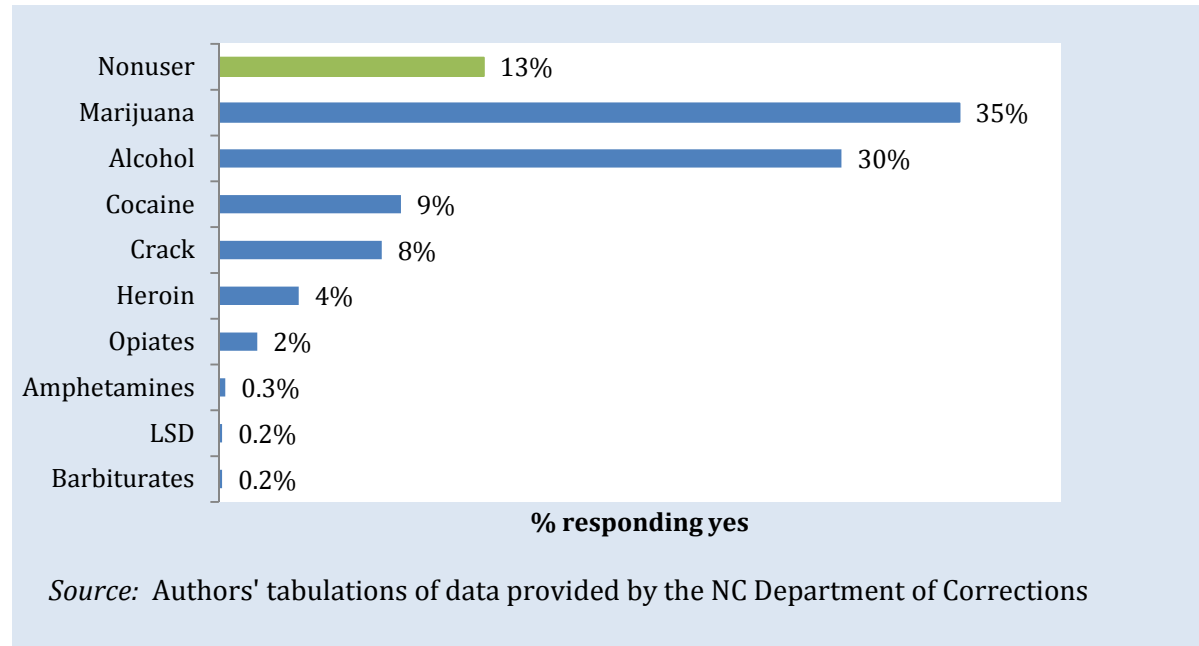
Age at entry	All entries to prison	Entries with at least 1 drug offense on commitment		Entries where drug offense was the most serious offense on commitment		Entries with substance use treatment need*	
		#	%	#	%	#	%
All Ages	659	233	35%	167	25%	417	63%
13-17	12	0	0%	0	0%	11	92%
18 and above	647	233	36%	167	26%	406	63%

Source: Authors' tabulations of data provided by the NC Department of Corrections
Note: *Substance use need was determined by scoring a three or higher on the Substance Abuse Subtle Screening Inventory (SASSI)

Upon entry, prisoners are asked to name their drug of choice. Relatively few of the 659 prisoners indicated that they did not use any substance (13 percent). Prisoners most commonly mentioned substance was marijuana (35 percent) followed by alcohol (30 percent). Approximately 16 percent named cocaine (9 percent) or crack (8 percent) as their drug of choice. A small percent of prisoners named heroin (4 percent), opiates (2

percent), amphetamines (.3 percent), LSD (.2 percent) or barbituates (.2 percent) as their drug of choice. See figure 16.

Figure 16. Drug of choice among prisoners from Durham County, 2009



Substance Abuse Among Durham County Jail Inmates

Indicator:

- Number and percent of jail inmates with drug, alcohol, or driving while intoxicated charges
- Number and percent of jail inmates who need substance abuse treatment

Relevance: According to a national study, incarceration costs in local jails cost average about \$20,000 year [28]. While the costs of treatment vary, it is estimated that every \$1 spent on substance use treatment in turn saves \$3 in societal costs. Closely examining repeat substance use offenders and the resources allocated for treatment of these individuals may play an important role in saving county dollars. Many individuals are arrested for acts not directly related to substance use but may have a substance use disorder. At the same time individuals arrested for an act related to substance use (ex. possession of drug paraphernalia) may or may not have a substance use disorder. This indicator directly measures the number and percent of jail offenders in need of treatment.

Data: The Durham County Sherriff's Office maintains a public database on inmates [29]. Reports are publically available online for inmates who were confined in the last 24 hours,

the last 30 days or who are currently in a Durham jail. The data provide information on each inmate's name, date confined, date released, statute description (reason they are confined), bond type and bond amount. In addition, by the Web site allows one to click on each inmate's name and learn information regarding the inmates the race, gender, birthdate and photo. However, it does not appear that ethnicity is captured.

Data were coded by statute descriptive as being related to a) controlled substance; b) alcohol and c) driving while impaired.

Data on inmates needing treatment come from The Durham Center LME, who funds a position in the jail to assess and link inmates with treatment. State House Bill 1473, implemented January 1, 2008, requires Sheriff's, Mental Health Local Management Entities (LME's), local health departments, and NC Department of Health & Human Services (NCDHHS) to work together on various issues concerning the mental health of inmates housed in the county jail. One requirement of this bill is that all offenders must be administered a standardized evidence-based mental health screening at the time of booking. If an offender screens positive for a mental health or substance abuse issue, he/she is referred to a mental health professional for a full assessment.

Findings: There were 607 inmates in the Durham County Sheriff's Office data. 170 (28%) had a drug related conviction, 13 had an alcohol related conviction (2%) and who had both drug and alcohol related conviction. In addition 30 individuals had a driving while impaired conviction (5%). Roughly one third of the inmates that were in jail on October 13, 2010 had a conviction related to alcohol or drugs.

After completion of the assessment, the jail liaison reports that 17%-18% of offenders in the Durham County jail are suspected of having a mental health or substance use disorder and need further evaluation (see table 3). Approximately 96% - 98% of these individuals have a substance abuse or co-occurring substance abuse and mental health disorder.

Table 3. Percent of Durham County Jail Inmates with Behavioral Health Disorder.

Quarter	% of jail population	# of unduplicated inmates assessed	# with substance abuse diagnosis	# with substance abuse and mental health diagnosis	# with substance abuse, mental health, and developmental delay diagnosis
Q4/FY09	18%	263	76	179	0
Q1/FY10	17%	285	80	194	0
Q2/FY10	17%	264	71	182	0
Q3/FY10	17%	258	80	170	3
Q4/FY10	17%	261	47	204	3

Source: Data from Jail Liaison report to The Durham Center, October 2010.

Future work: In order to track trends in the inmate population by cause of confinement, potentially the Sheriff's Office could provide a historical extract of the data. Breakdowns could be conducted by race, gender and age. Because date of confinement is provided on a daily basis, time series analysis could look to determine if there are times of the year that are more likely to have controlled substance, impaired driving and alcohol related confinements.

Substance Abuse among Adjudicated Juveniles

Indicators:

- Number and percent of youth involved with the juvenile justice system who are in need of treatment.

Relevance: According to national estimates, youth who are in residential custody are more likely than the general population to use alcohol or drugs. Among youth in custody, 74 percent tried alcohol (vs. 56 percent), 84 percent tried marijuana (vs. 30 percent) and 50 percent tried another illicit substance (vs. 27 percent) [30]. Juveniles in custody not only have higher prevalence of having tried substances, but they also report high levels of use near the time of being placed into custody with 59 percent saying that they were drunk or high on drugs at least several times a week in the months immediately before being taken into custody.

Juveniles who are in custody represent a special population because prior delinquency is associated with future delinquency and criminal behavior. Moreover, individuals who were involved in the juvenile justice system struggle during the transition to adulthood. These individuals are less likely to complete high school or college, have greater difficulty earning employment, and have greater residential instability [31, 32]. One researcher estimates that the societal savings of saving a 14-year-old, high-risk juvenile from a life of crime is between \$2.6 and \$5.3 million [33].

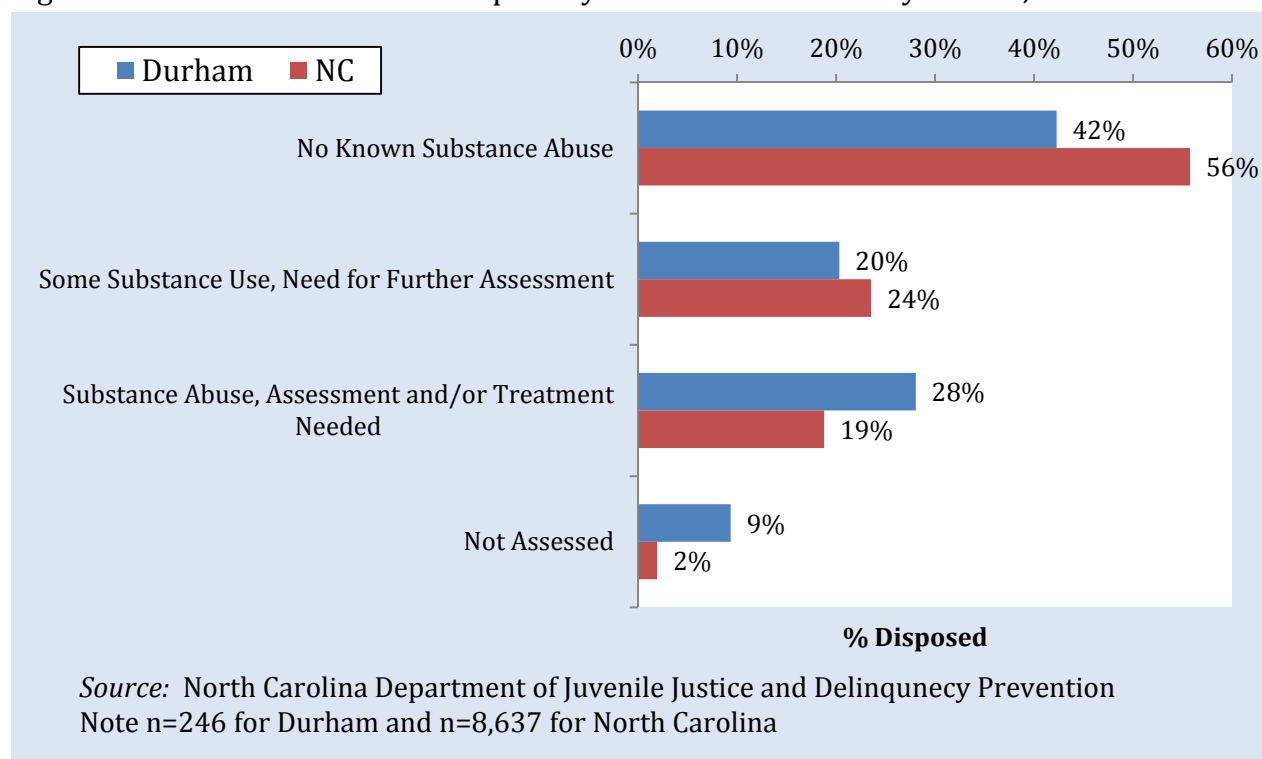
Data: Two sources provide information on the substance use needs of youth in the juvenile justice system. The North Carolina Department of Juvenile Justice and Delinquency Prevention conducts a needs assessment with youth at their disposition. In 2009, the assessment rate for disposed youth was 91 percent in Durham and 98 percent statewide, indicating that most youth were assessed. The assessment is designed to determine the types of services, supports, and supervision the youth will need in various settings (social, family, school, etc.). Included in this needs assessment are substance use problems. The data were received in personal communication on June 2010.

In addition, the Durham County mental health Local Management Entity (“The Durham Center LME”) funds a licensed clinician to conduct comprehensive assessments of youth involved with the juvenile justice system through the MAJORS program.

Findings: In 2009, 246 Durham youth were disposed and, according to NC Department of Juvenile Justice & Delinquency Prevention, 28 percent of disposed youth in Durham were identified as abusing substances and/or in need of treatment relative to 19 percent of youth disposed statewide. However, among those assessed, youth in Durham appear to have a greater need for substance abuse treatment than similar youth statewide (see figure 17). While a lower percentage of youth in Durham were identified as needing further assessment for substance use services (20 percent vs. 24 percent), a higher percentage of youth in Durham were not assessed, so we do not know what their treatment needs may have been. Although it is difficult to determine why disposed youth in Durham have a higher need for substance use services than similar youth statewide, it is clear that a quarter to a half of these youth are in need of treatment.

While there were slightly fewer youth disposed in 2009 than in 2008 both statewide and in Durham County, the overall percentage of disposed youth needing treatment services remained relatively constant.

Figure 17. Needs assessment of disposed youth in Durham County and NC, 2009



Through the Durham LME-funded program, MAJORS, 73 percent of youth were assessed and 61 percent of those youth were identified as having a substance use treatment need.

In order to understand the discrepancies between the two assessments, it will be necessary to compare of the type of assessment tool used (e.g. the tool used by the MAJORS program is more comprehensive and sensitive), the procedures for assessment, and the skill and training of the staff administering the tools (MAJORS staff person is a licensed clinical social worker). However, regardless of the tool, a large percent of court-involved youth have substance use issues.

Substance Abuse Arrests in Durham Public Schools

Indicator:

- Number and rate of arrests for possession of an illicit substance or alcohol on school property.²

² Three year averages were used because the number of arrests in any one year is typically small. A single event that generated several arrests may skew the data. Thus, three year averages would be more stable. Schools that did not have three or four years of data are not included in the table.

Relevance: Drug patterns may vary by school and by neighborhood. Drug epidemics can spread across schools and neighborhoods. School officials need to know which drugs to look for in their schools. School-generated information that tracks changes across schools can inform law enforcement and treatment planning.

Schools are required to report possession of alcohol and illicit substances on school property. Unfortunately, we cannot distinguish whether the arrestee was a youth at the school or someone else on school property. Nonetheless, the arrests for illicit possessions provide a picture of where illicit substances are physically available.

Data: Since 1995, schools in North Carolina have been required to report on 17 different offenses that occur on school property, including possession of alcohol and illicit substances. Data are available from the North Carolina Department of Public Instruction [34].

Findings: Durham Public Schools reported that students' possession of a controlled substance made up 40% (112 incidents) and possession of alcohol 5% (13 incidents) of the 284 reportable incidents on school grounds in the 2009-2010 school year [34]. Table 4 lists average rates of arrests related to alcohol or illicit substances on Durham's middle or high school grounds. Not surprisingly, the schools with the highest rates of arrests tended to be high schools. The average arrest rate for 2006-2007, 2007-2008, and 2008-2009 for substances or alcohol per 1,000 students were 17.3 for Southern High School, 16.4 for Hillside High School, 15.7 for Northern High School, 10.6 for Hillside New Tech, and 11.5 for Riverside High School.

Table 4. Arrests on school grounds in Durham middle and high schools, average 2006-2007, 2007-2008, 2008-2009

Name	Ave Daily Membership	Average # of arrests for possession of:			Average rate of arrest per 1,000 students		
		Alcohol	Substance	Alcohol or Substance	Alcohol	Substance	Alcohol or Substance
Brogden MS	806	0	0	0	0	0	0
Carrington MS	1085	2.7	6.7	9.3	2.5	6.1	8.6
Chewning MS	608	0.7	2.7	3.3	1.1	4.4	5.5
Clement Early College HS	288	0	0	0	0	0	0
Durham School of the Arts	1388	1.7	5.7	7.3	1.2	4.1	5.3
Githens MS	926	0	4.3	4.3	0	4.7	4.7
Hillside HS	1343	1.3	20.7	22	1	15.4	16.4
Hillside New Tech	142	0	1.5	1.5	0	10.6	10.6
Jordan HS	1836	4.7	10.3	15	2.5	5.6	8.2
Lakeview HS	165	0	1.3	1.3	0	8.1	8.1
Lowe's Grove MS	635	1	1	2	1.6	1.6	3.1
Middle College HS	88	0	0	0	0	0	0
Neal MS	689	0	2	2	0	2.9	2.9
Northern HS	1595	6.3	18.7	25	4	11.7	15.7
Pearson Middle Magnet	190	0	0.5	0.5	0	2.6	2.6
Riverside HS	1890	2.3	19.3	21.7	1.2	10.2	11.5
Rogers Herr MS	622	0	0.3	0.3	0	0.5	0.5
Shepard MS	429	0	1.3	1.3	0	3.1	3.1
Southern HS	1274	1.7	20.3	22	1.3	16	17.3
Southern School of Engineering	102	0.5	1	1.5	4.9	9.9	14.8
<i>Source:</i> Authors' tabulations of data available from the NC Department of Public Instruction							

Arrests on College Campuses

Indicators:

- Arrests for liquor law violations on college main campuses.
- Arrests for drug violations on college main campuses.

Relevance: Arrests on specific college campuses for liquor law and drug violations provides a sense of whether – and the extent to which – these events are occurring. When interpreting changes in arrest rates, it is important to note that arrests can vary based both on the prevalence of a particular crime as well as the resources devoted to policing a crime.

Data: The Office of Postsecondary Education (OPE) of the U.S. Department of Education provides information regarding arrests on college campuses through its Campus Security Data Analysis Cutting Tool. All postsecondary institutions that receive Title IV funding (the federal student aid programs) are required to annually submit crime statistics. Data come from the OPE Campus Security Statistics Web site database (US Department of Education. Campus Security Data Analysis Cutting Tool. Available at <http://ope.ed.gov/security/>).

Findings: There are three main college campuses in Durham. Colleges and universities include:

- Duke University—private institution that provides four-year degrees as well as advanced degrees that enrolled about 14,000 students in 2008.
- Durham Technical Community College awards two year degrees to students and enrolled approximately 5,400 students in 2008.
- North Carolina Central University, a historically Black university that enrolled about 8,000 students in 2008.

Figures 18 and 19 show the number of arrests for liquor law violations and drugs that occurred at these postsecondary institutions from 2001-2008 (no data are available for 2006). Duke University had a relatively large number of arrests (27) in 2004 for liquor law violations but fewer in 2008 (9). The only reported arrests for liquor law or drug violations on the campus of Durham Technical Community college were one in 2005, two in 2007 and one in 2008. North Carolina Central University appears to have an increase in arrests for drugs in recent years with six arrests in 2005, 31 in 2007 and 54 in 2008.

Figure 18. Arrests for liquor law violations on college campuses in Durham: 2001-2008

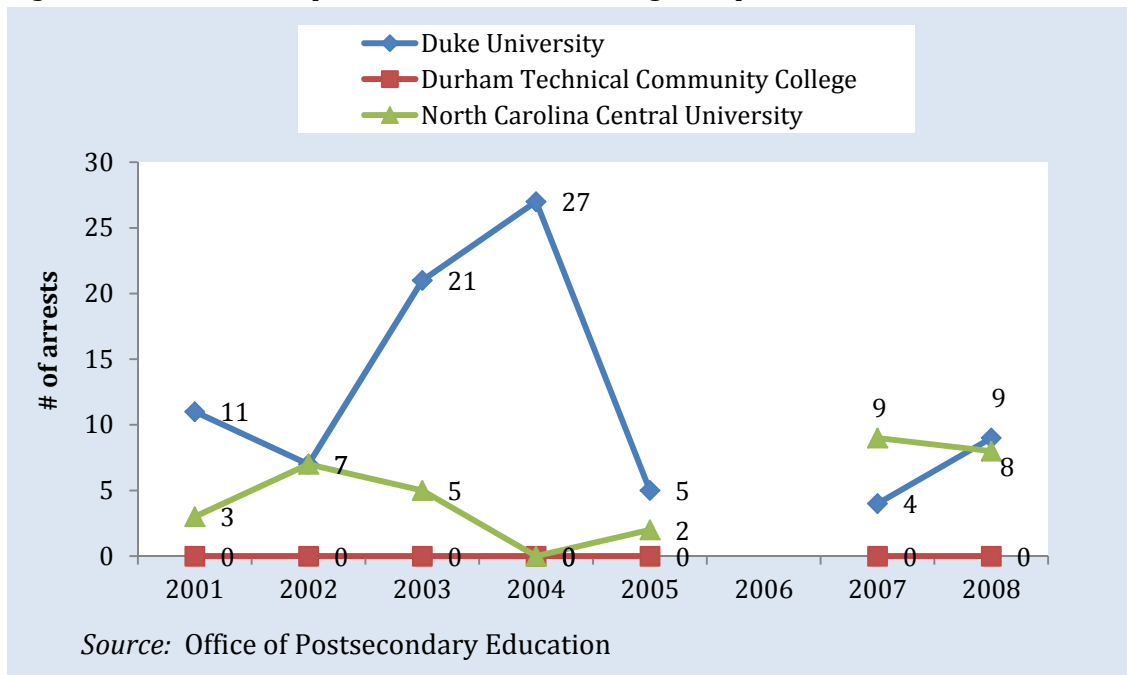
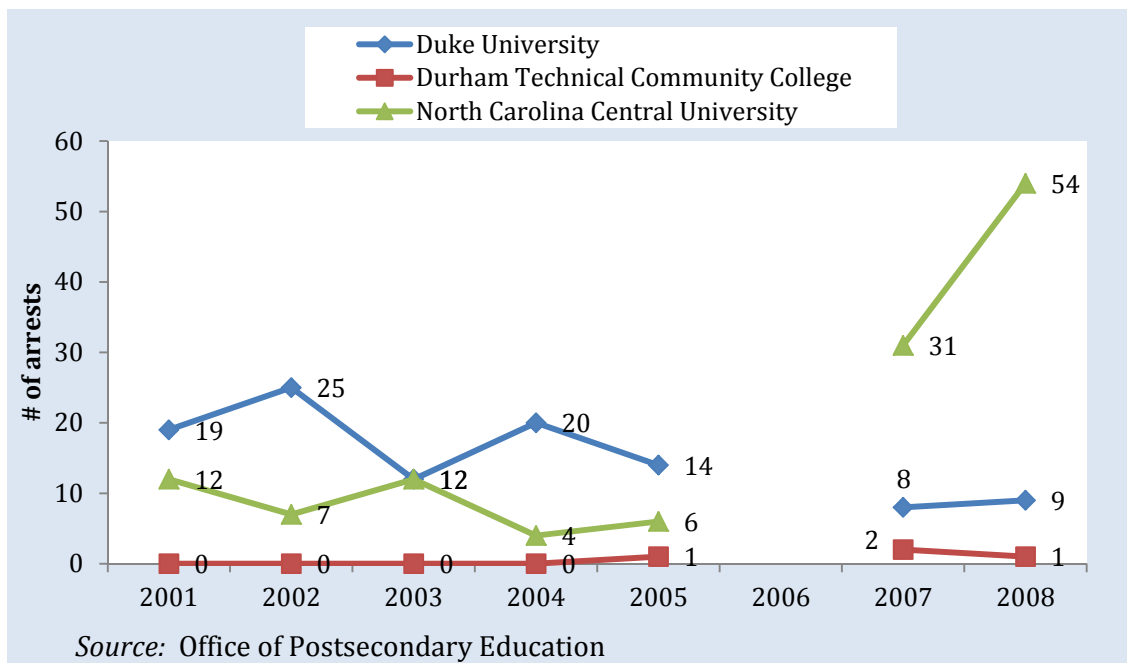


Figure 19. Arrests for Drugs on College Campuses



Substance-related calls to service to the Durham Sherriff's Office

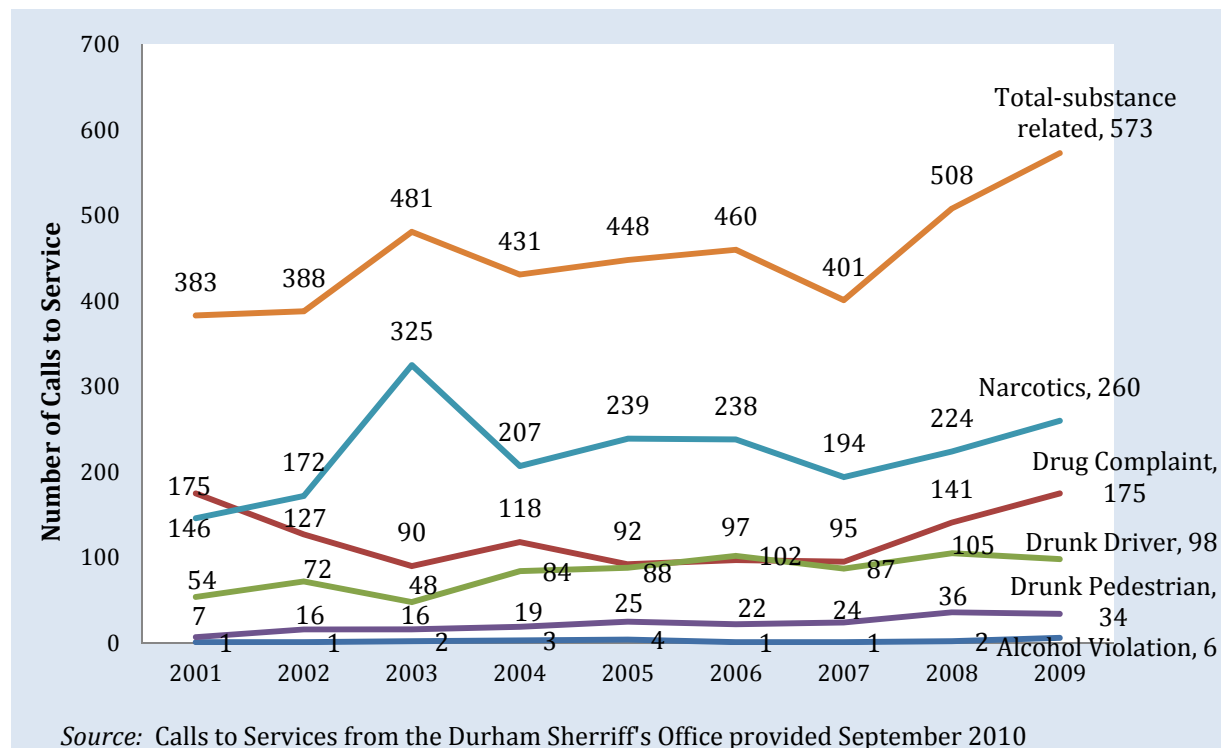
Indicators: Calls received by the Durham County Sherriff's Office for the following violations:

- Narcotics
- Drug Complaint
- Drunk Driver
- Drunk Pedestrian
- Alcohol Violation

Data: The Durham Sherriff's Office collects information on calls to service by various complaints. The data provide information on location and date. Currently this is one of the best sources of information on location and date of crimes related to substance use.

Findings: Figure 20 provides information on calls to service to the Durham County Sherriff's Office for potential violations related to controlled substances. From 2008 to 2009 there was approximately a 13% increase in the number of complaints related to controlled substances. Narcotics complaints were up 13% and drug complaints were up 24% during this time period.

Figure 20. Durham County Sherriff's Office Calls to Service For Various Violations Related to Substances



Next steps: The data provided by the Sherriff's include information on the date and location of the call. These data could be analyzed to examine space and time trends. An analysis similar to the Durham Bulls Eye which was designed to focus on areas with violent crime, could examine where drug crimes are most likely to occur.

Alcohol

Prevalence of Binge and Heavy Drinking Among Adults

Indicators:

- Number and percent of individuals who have participated in binge drinking in the past 30 days.
- Number and percent of individuals who report heavy drinking.

Relevance: Alcohol abuse is associated with binge drinking (adults having five or more drinks on one occasion), heavy drinking (averaging more than one drink per day for women or two drinks per day for men), and underage drinking. In addition, alcohol consumption during pregnancy has been shown to have serious consequences for young children.

Data: Survey research on alcohol consumption in Durham County comes from the Behavioral Risk Factor Surveillance System (BRFSS) published by the CDC and available from the North Carolina State Center for Health Statistics. Data should be interpreted with caution as the number of respondents to the BRFSS Alcohol questions is small, and some answers had less than 50 respondents answer yes.

Findings: Using binge drinking and heavy drinking as measures to assess potentially unhealthy behaviors, there are few differences between Durham residents and the rest of the state (see figures 21 and 22). Binge drinking among Durham residents was similar to that of the rest of the state (15.7 percent vs. 12.8 percent). According to the 2009 BRFSS, in Durham County 20.8 percent of males and 11.2 percent of females reported binge drinking. A smaller percentage reported heavy drinking (7.9 percent of males and 6.4 percent of females) [35]. The overall rate of binge drinking did not differ by race (White vs. minorities) (see table 5). Among Durham residents, heavy drinking does not differ by gender or race [35].

Table 5: Alcohol consumption among Durham County and NC adults, 2009

	Durham					North Carolina	
	n	Mean	CI (95%)	White	Minority	Mean	CI (95%)
Binge Drinking in last 30 days (5 or more drinks)							
None	165	70.4%	59.9-79.1	72.2%	68.5%	71.2%	68.8-73.5
Once	15	6.9%	3.8-12.1	10.2%	3.3%	10.4%	8.9-12.0
Twice	10	9.8%	4.5-20.1	7.8%	11.9%	6.6%	5.2-8.2
3-7 times	12	10.9%	5.4-20.9	7.9%	14.2%	8.6%	7.0-10.5
8-30 times	4	2.1%	0.7-6.2	2.0%	2.2%	3.3%	2.5-4.2
Heavy drinkers (adult men having more than two drinks per day and adult women having more than one drink per day)							
Yes	23	7.1%	3.9-12.6	7.0%	7.8%	4.4%	3.7-5.1

Source: NC Behavioral Risk Factor Surveillance System (BRFSS).

Figure 21: Durham County and NC respondents that reported they had five or more drinks on one or more occasions in the past month (binge drinking), 2004-2009

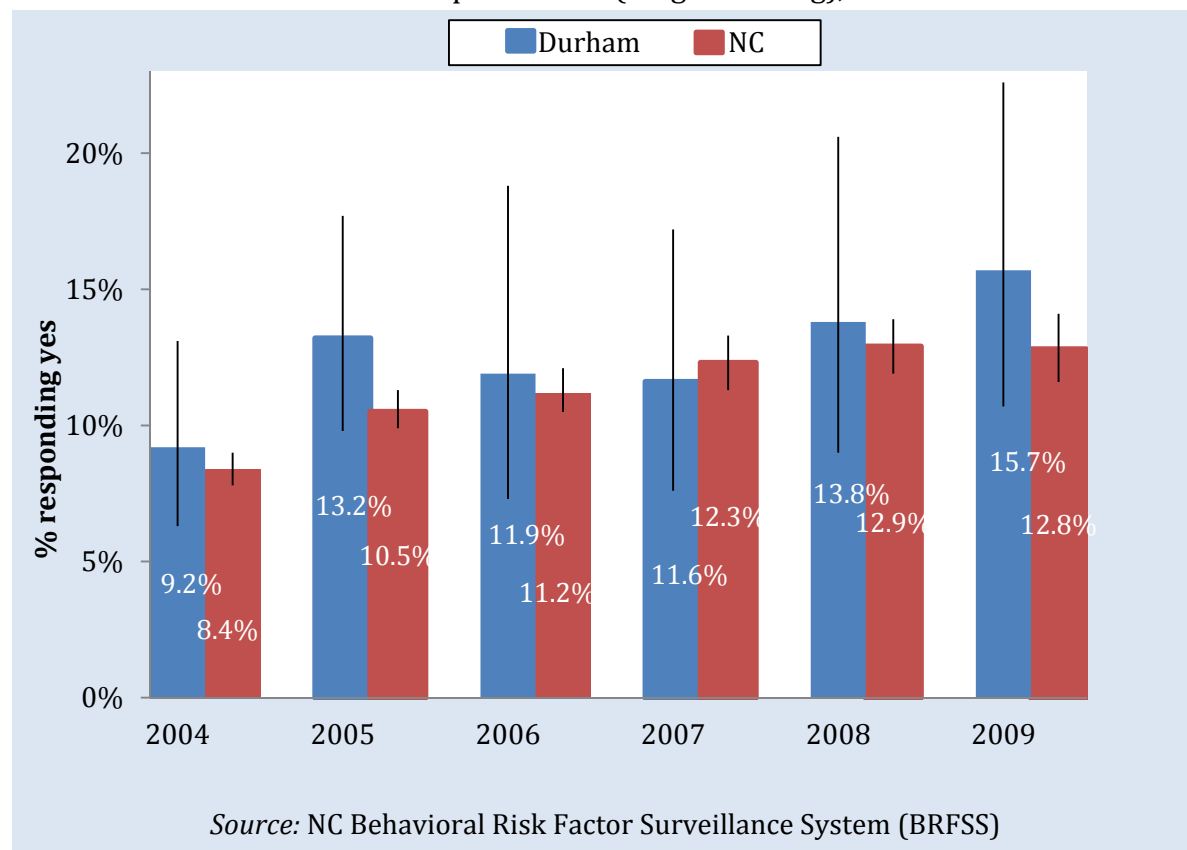
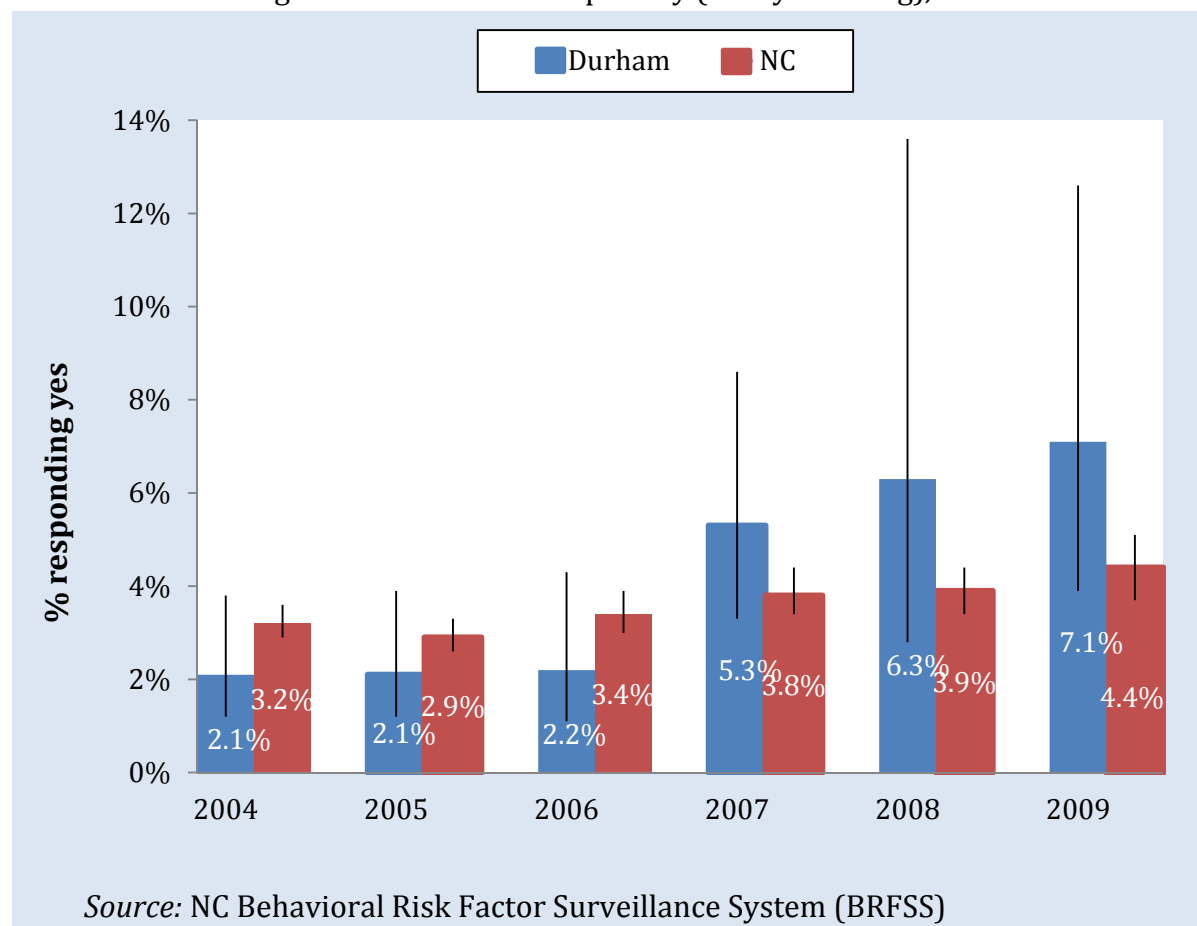


Figure 22: Durham County and NC adult men having more than two drinks per day and adult women having more than one drink per day (heavy drinking), 2004 -2009



Drinking and Driving in Durham

Indicators:

- Percent of motor vehicle accidents involving alcohol.
- Number and percent of fatal crashes involving alcohol.
- Percent of non-fatal motor vehicle accidents involving alcohol
- Rate of impaired driving convictions.
- Rate of arrests for DUI by State Bureau of Investigation.
- Percent of Durham residents self-reporting driving after having consumed too much alcohol.

Relevance: Drinking and driving is a burden to society. The annual cost of alcohol-related crashes is more than \$51 billion dollars in the United States [36, 37]. In addition, according

to a review of the literature by the National Highway Traffic Safety Administration, across the United States in 2008:[38, 39].

- 7 percent of all traffic crashes were alcohol related.
- 32 percent of fatal crashes were alcohol related.
- There is one alcohol-impaired driving fatality every 45 minutes.
- 16 percent of children aged 0-14 years who died in a motor vehicle accident died in alcohol-related crashes.
- 46 percent of the children killed in alcohol-related deaths were passengers in vehicles with drivers who had been drinking.
- 34 percent of deaths in drivers aged 21-24 years old had a BAC of .08 or higher.
- Drivers with a BAC of .08 or higher involved in fatal crashes were eight times more likely to have a prior conviction for driving while impaired (DWI) than were drivers with no alcohol.
- Alcohol involvement — either for the driver or for the pedestrian — was reported in 48 percent of the traffic crashes that resulted in pedestrian fatalities. In 36 percent of pedestrian deaths, the pedestrian had a .08 blood alcohol count (BAC) or higher.
- In 53 percent of pedestrian deaths among individuals aged 21-24 years, the pedestrian had a .08 BAC or higher.

In 2008 in North Carolina:[40]

- Nearly 30 percent of all fatal crashes occurring in North Carolina involved alcohol.
- A reportable crash was 1.6 times more likely to be serious enough to cause injury if alcohol was involved.
- Crashes involving injury were 3.3 times more likely to include a fatality if alcohol was involved.
- While one of every 18 crashes involved alcohol, one of every three fatal crashes and one of every 12 non-fatal injury crashes involved alcohol.

Data: The data come from the North Carolina Alcohol Facts Web site [41]. This Web site includes information on impaired driving cases from the North Carolina Administrative Office of the Courts (AOC) and motor vehicle crashes from the North Carolina Division of Motor Vehicles for the years 2000-2008. Arrests for driving under the influence are collected by the State Bureau of Investigation (SBI). The Federal Bureau of Investigation coordinates a national effort to collect arrest data in a consistent format from all law enforcement agencies across the country. Beginning in 1973, law enforcement agencies across North Carolina have voluntarily submitted information to the State Bureau of Investigation on specific crimes committed in their area of jurisdiction on arrests by age, gender, and race of the perpetrator. For Durham, the Durham Police Department, County Sheriff's Office, Eno River State Park, North Carolina Central University, and Duke

University each report arrests. Self-report data on drinking and driving come from the BRFSS.

Findings: While drinking and driving is a problem in most communities, Durham problems are in line with North Carolina averages. In 2008 in Durham County, 4.3 percent of all reported crashes were related to alcohol, compared to 5.7 percent in North Carolina [41]. This is a slight rise compared to earlier years (3.3 percent, 3.6 percent, 3.8 percent, and 3.4 percent for years 2004-2007). A small number of these crashes result in fatalities.

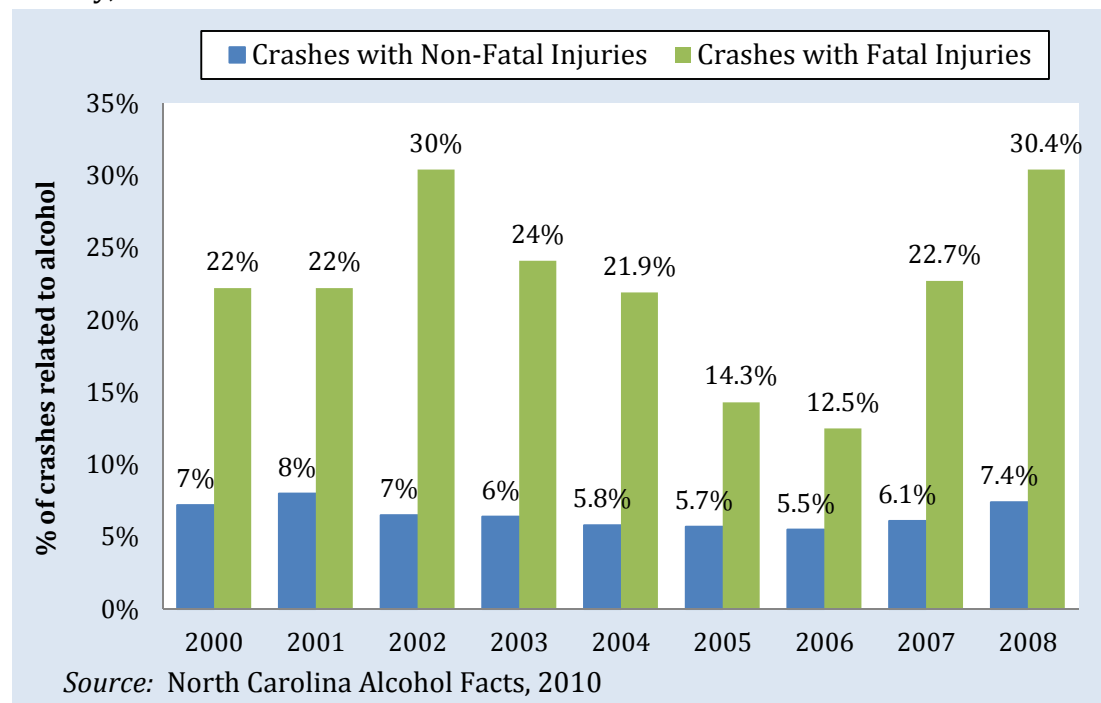
The number of fatal crashes in Durham County has not changed much since 2004; however, the percent of fatal crashes related to alcohol has increased since 2004 (see Table 6).

Table 6: Total crashes and fatal crashes in Durham County related to alcohol, 2004-2008

	2004	2005	2006	2007	2008
Total crashes	8,510	8,366	7,650	7,654	7,459
Total crashes related to alcohol	283	300	287	261	318
# of Fatal crashes	31	21	22	21	23
# of Fatal crashes related to alcohol	7	3	3	5	7
% of total crashes related to alcohol	3.3%	3.6%	3.8%	3.4%	4.3%
% of fatal crashes related to alcohol	22.6%	14.3%	13.6%	23.8%	30.4%
<i>Source: North Carolina Alcohol Facts, 2010</i>					

Of all the crashes that resulted in injuries in Durham County, alcohol plays a major role. According to the North Carolina Division of Motor Vehicles, 30.4 percent of these fatal accidents involved alcohol in 2008, which is similar to North Carolina (29.7 percent) [41]. Approximately 243 injuries a year in Durham County are related to traffic accidents involving alcohol [41]. Looking at Figure 23, since 2000, of all reported crashes with fatal injuries, a higher percentage of these crashes were related to alcohol compared to the percentage of crashes with non-fatal injuries that were related to alcohol. For example, in 2008 30.4 percent of crashes that resulted in a fatal injury were related to alcohol, while only 7.4 percent of crashes with a non-fatal injury were related to alcohol.

Figure 23: Percent of non-fatal and fatal crashes that were related to alcohol in Durham County, 2000-2008

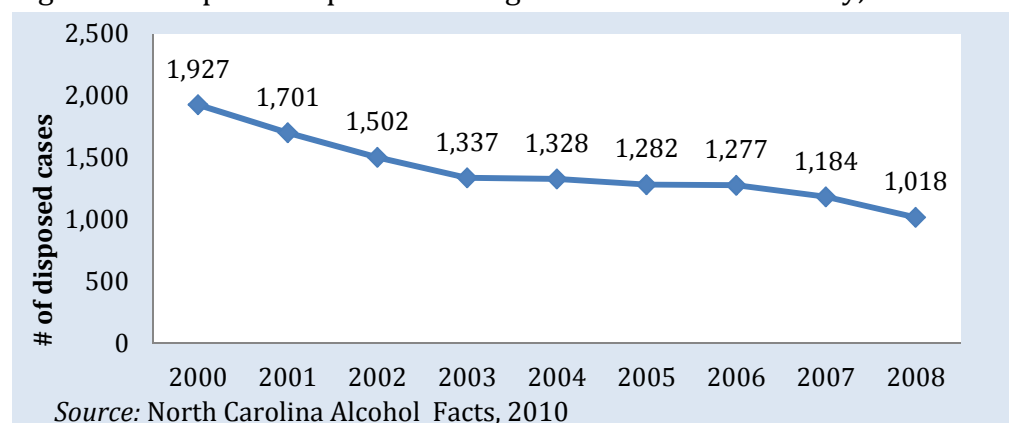


In North Carolina, drinking-driving charges fall into five categories in the judicial system:

- Misdemeanor Aid and Abet Impaired Driving.
- Misdemeanor Drive After Consuming.
- Misdemeanor Driving While Impaired.
- Misdemeanor DWI Commercial Vehicle.
- Felony Habitual Impaired Driving.

Each impaired driving charge is a cost to the judicial system in Durham County. Since 2000, the number of disposed impaired cases has declined. See figure 24.

Figure 24: Disposed impaired driving cases in Durham County, 2000-2008



Arrest rates for driving under the influence have also been on the decline since 2000 – both for adults and juveniles in Durham County as well as North Carolina. For both adults and juveniles, arrest rates are lower in Durham County compared to North Carolina. Rates for juveniles are much lower. See figures 25 and 26 for arrest rates in adults and juveniles in both Durham County and North Carolina.

Figure 25: DUI arrest rates in adults in Durham County and NC, 2000-2008

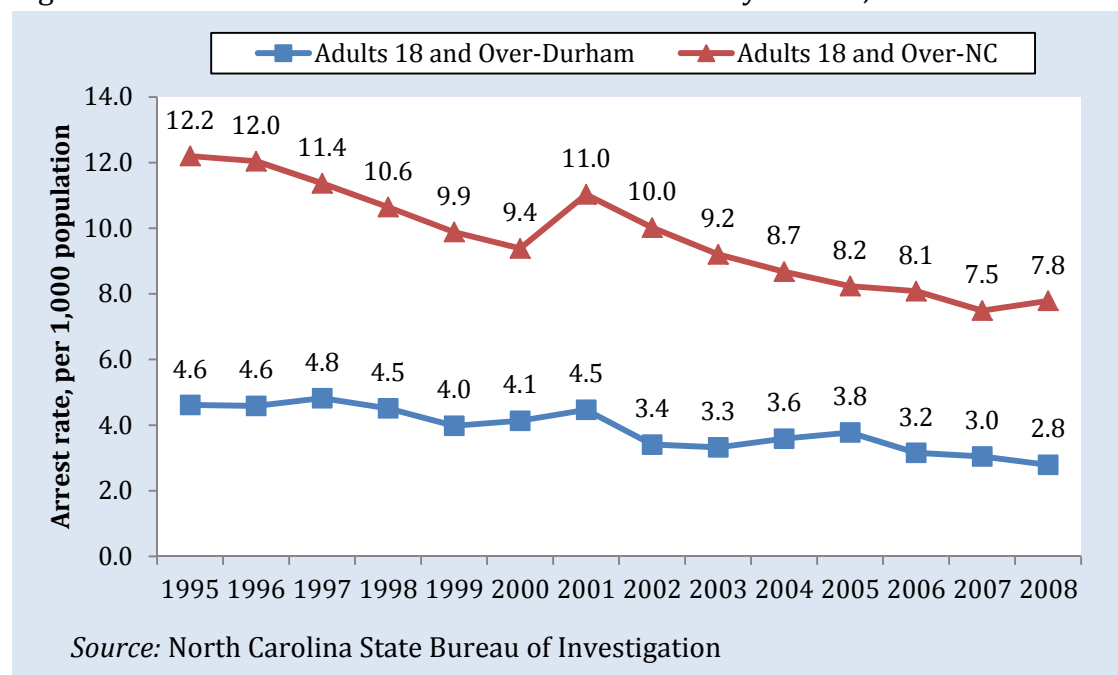
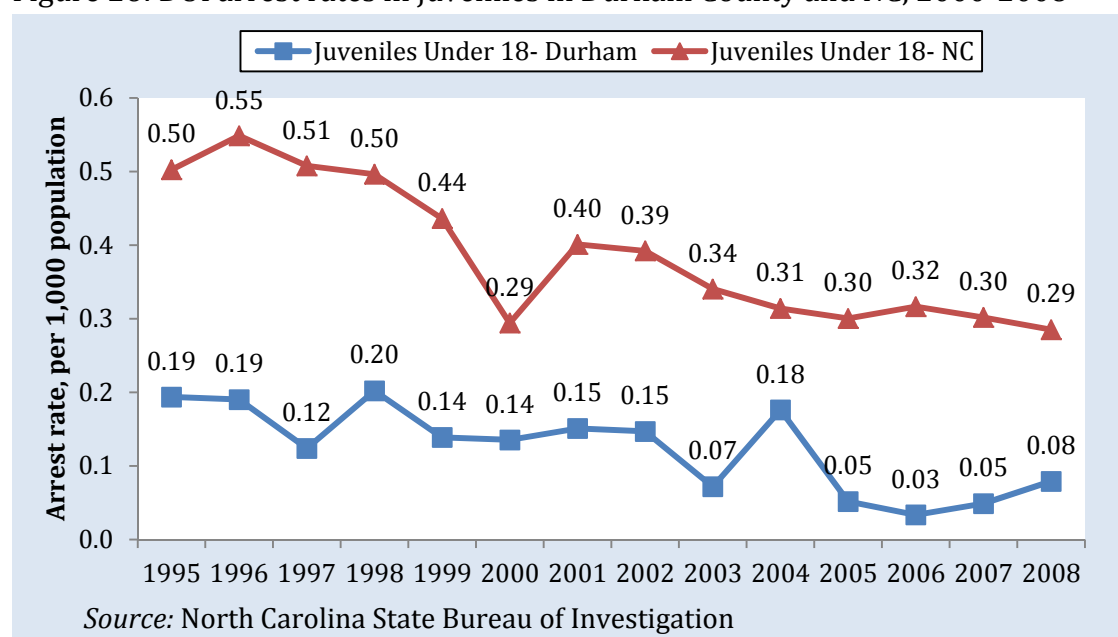
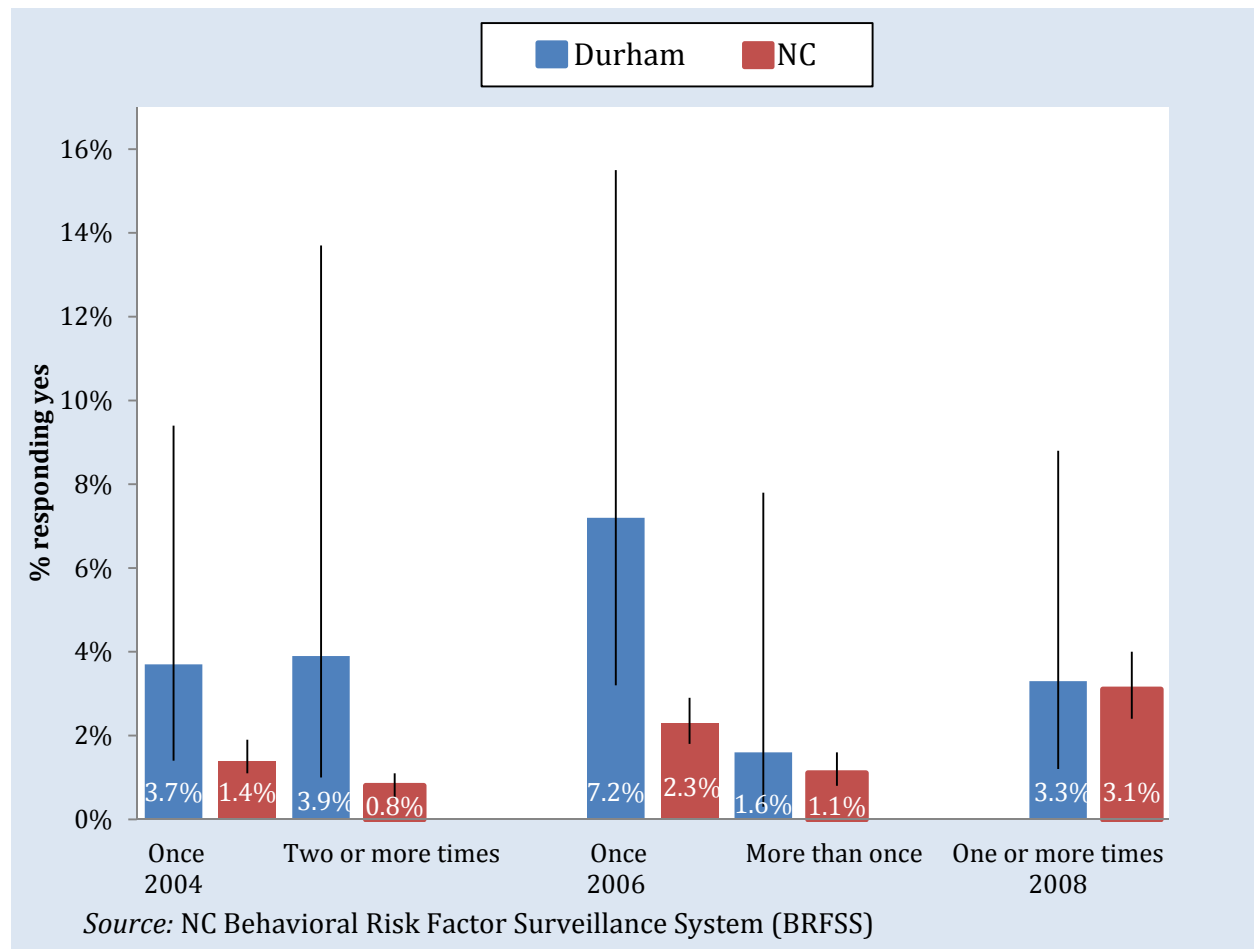


Figure 26: DUI arrest rates in juveniles in Durham County and NC, 2000-2008



Based upon statistics regarding alcohol-related crashes and injuries, the number of court cases for drinking and driving, and the number of arrests for drinking and driving, Durham seems to be in line with or performing slightly better than the state of North Carolina. However, it is interesting to note that while the number of disposed cases and DUI arrests has been on the decline, the percent of fatal crashes related to alcohol has seen a slight increase. In 2008, self-reported drinking and driving in Durham residents was similar to North Carolina respondents (see figure 27 for self-reported drinking and driving).

Figure 27: Percent population who reported driving after drinking too much in Durham and NC, 2004-2008



Smoking

Prevalence of smoking among adults and long-term health consequences

Indicators:

- Number of adults (individuals age>18) who smoke
- Percent of pregnant women who smoke
- Rate of lung and bronchial cancer deaths (long-term indicator)

Relevance: Smoking is the leading cause of preventable death. According to the CDC, “more deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined” [42]. Across the nation, approximately 20 percent of deaths each year are attributable to smoking or secondhand smoke [42, 43].

The following is a partial list of the negative consequences of tobacco use:

- **Cancer:** Cancer is the second leading cause of death in the United States, North Carolina, and Durham.
 - Lung cancer is the most common form of cancer. Smoking is an attributing factor in the majority of lung cancer deaths (90 percent for males and 80 percent for females).
 - Smoking increases the risk of a variety of cancers including cancer of the oral cavity, pharynx, larynx, esophagus, lung, bladder, stomach, cervix, kidney, and pancreas, as well as myeloid leukemia.
- **Coronary Heart Disease and Stroke:** Coronary heart disease is the leading cause of death and stroke, and it is the third leading cause of death in the United States.
- **Other Health Effects**
 - Smoking leads to reproductive health problems:
 - Reduces women’s fertility.
 - Leads to complications in pregnancy, premature birth, low-birth-weight infants, still birth, and infant death.
 - Decreases the immune system’s ability to fight infections leading to:
 - More missed work.
 - Higher rates of medical care use.
 - More admissions to the hospital.

Data: Survey research on smoking behavior in Durham County comes from the Behavioral Risk Factor Surveillance System (BRFSS) published by the CDC and available from the

North Carolina State Center for Health Statistics. Data on a mother's smoking during pregnancy comes from the North Carolina Vital Statistics, Volume 1: Population, Births, Deaths, Marriages, Divorces, and is accessed from the North Carolina State Center for Health Statistics. This data are collected from birth certificates of all babies born that are residents of Durham County. Additional information on mother's smoking status comes from the BABY BOOK, various maternal and infant variables such as age, race, birth order, birth weight, and number of prenatal visits, as well as medical conditions of the mother, the labor/delivery, and the newborn.

Findings:

Smoking in Adults

According to data from the Behavioral Risk Factor Surveillance System (BRFSS), approximately 10.6 percent of Durham residents over the age of 18 were current smokers in 2009 (see figure 28) [35]. In 2009, 6.2 percent of respondents reported smoking every day (see figure 29). Table 7 shows responses to questions about smoking from the BRFSS. For smoking rates in males and females see figure 35, for smoking rates in minorities and whites see figure 36.

Figure 28: Percentage of adults reporting they are current smokers in Durham and NC, 2004 to 2009

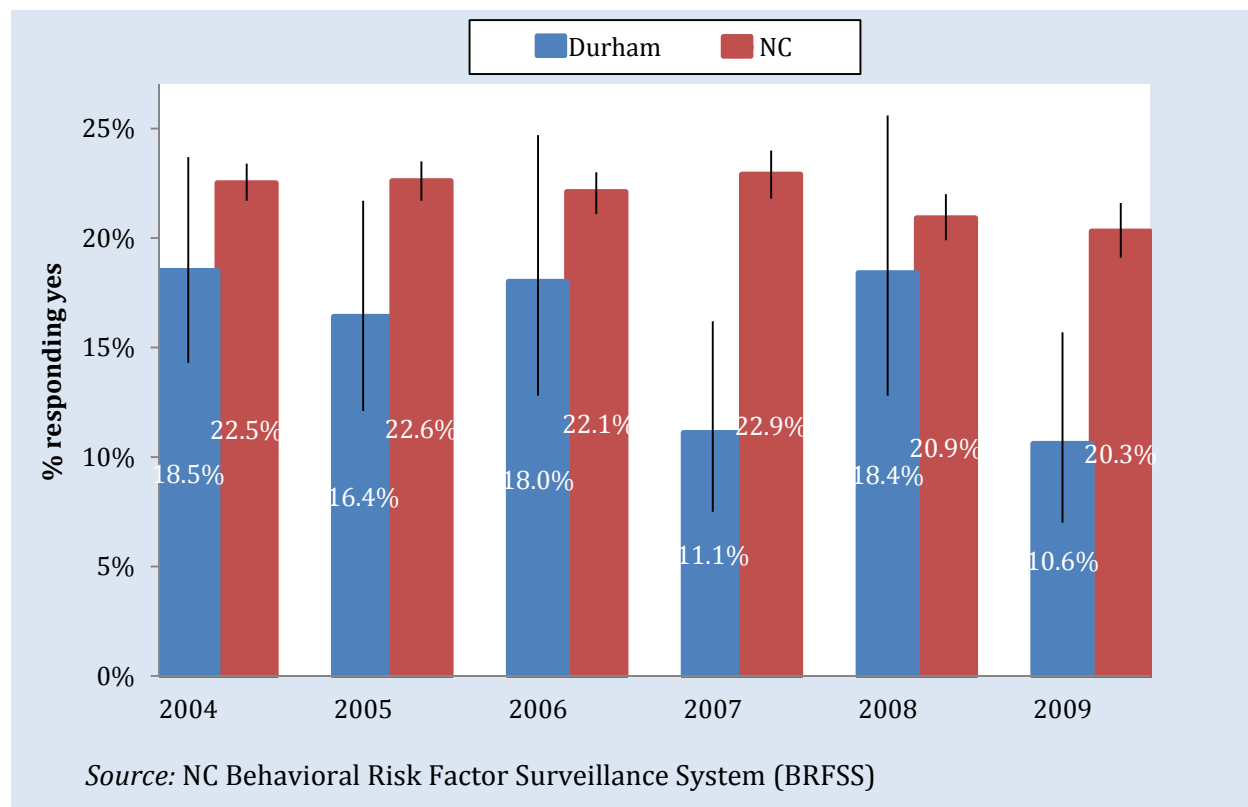


Figure 29: Percentage of adults reporting smoking every day in Durham and NC, 2004 to 2009

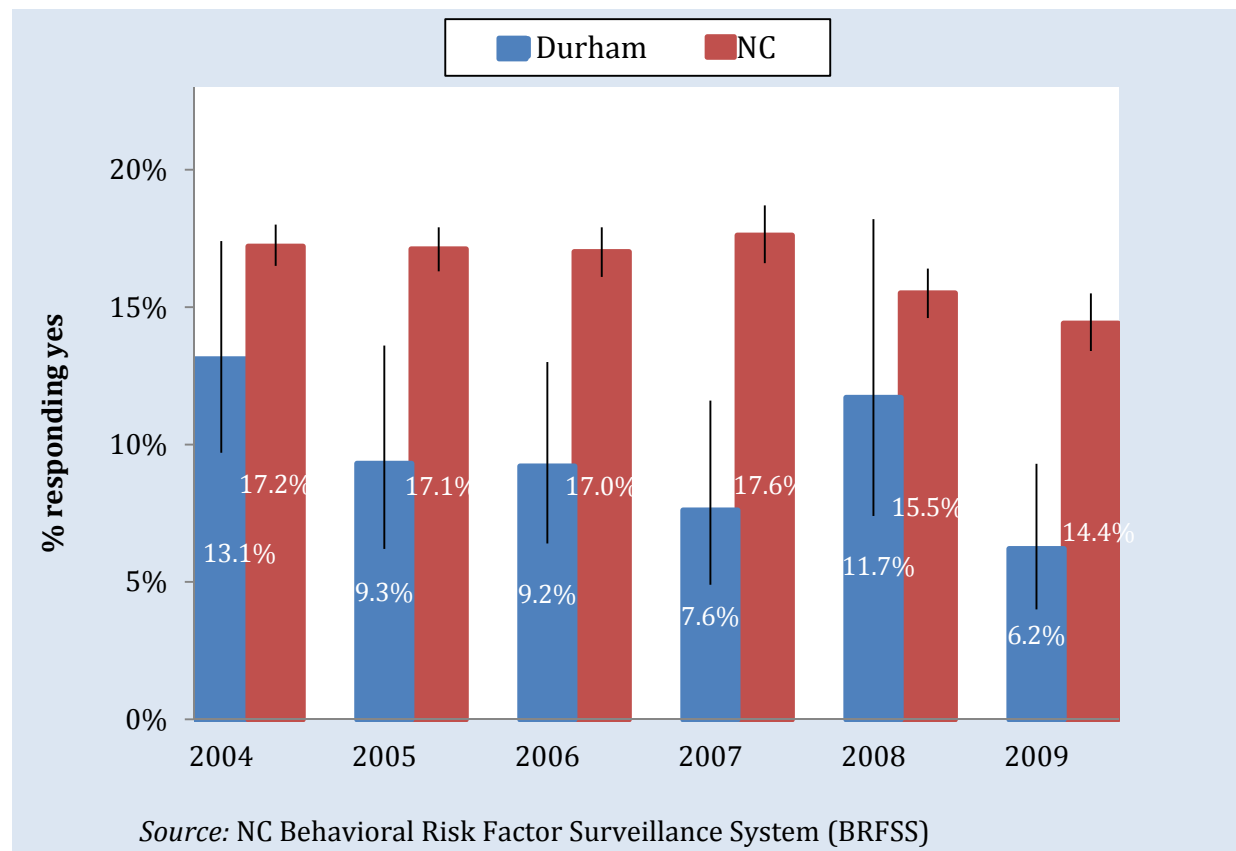


Table 7: Smoking status of adults in Durham, NC, and the nation, 2009.

	Durham		North Carolina	
	Mean	Confidence Interval	Mean	Confidence Interval
Adults who are current smokers (%)	10.6	7.0-15.7	20.3	19.1-21.6
<u>Four levels of smoking status (%)</u>				
Smoke every day	6.2	4.0-9.3	14.4	13.4-15.5
Smoke some days	4.4	1.9-9.7	5.9	5.1-6.8
Former smoker	26.8	20.2-34.5	26.2	24.9-27.5
Never smoked	62.7	55.0-69.7	53.5	52.0-55.1

Source: NC Behavioral Risk Factor Surveillance System (BRFSS)

Figure 30: Percent of Durham County adults who report currently smoking, male vs. female, 2004 to 2009

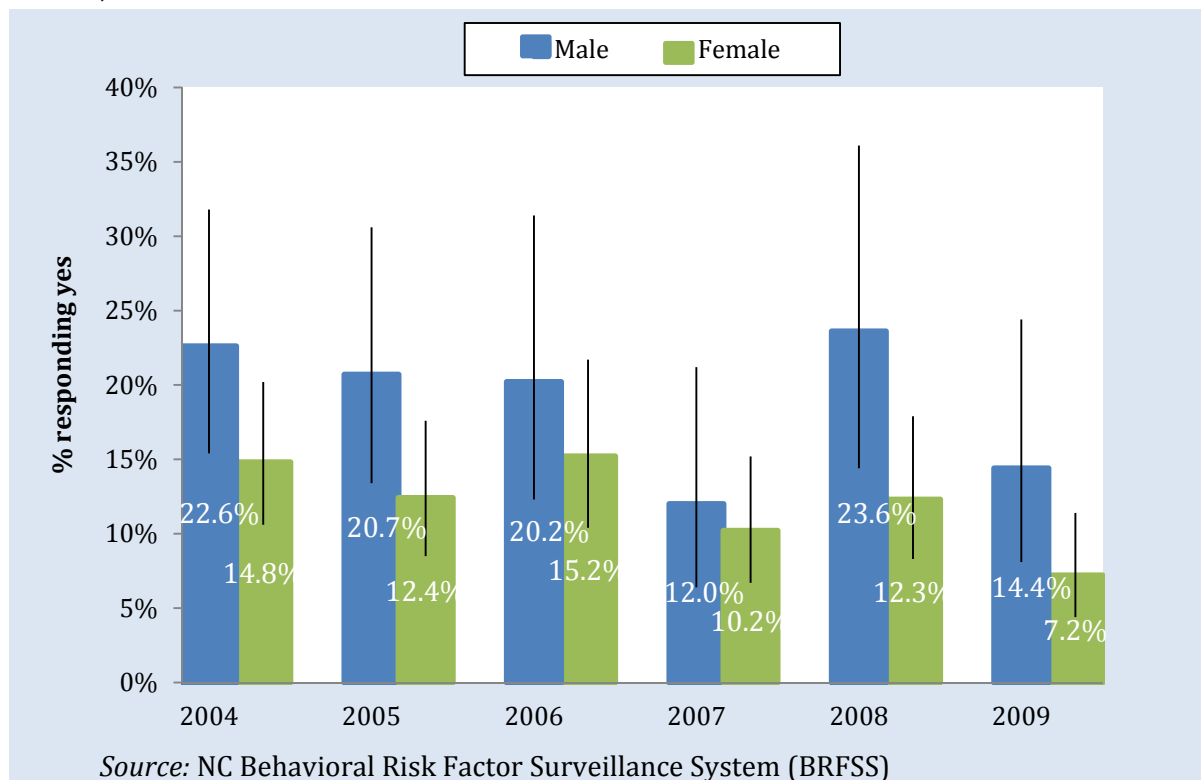
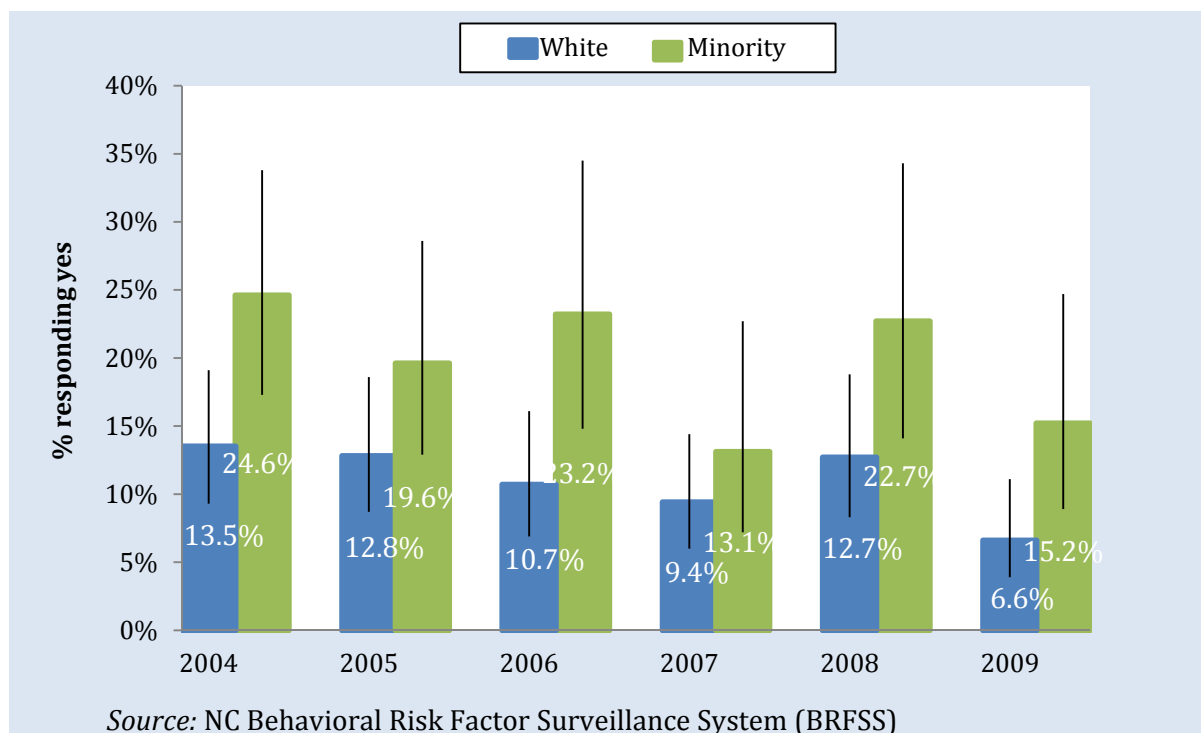


Figure 31: Percent of adults in Durham who report currently smoking, White vs. Minority 2004 to 2009



Smoking Related Deaths

According to data from the 2010 County Health Data Book, the leading cause of death between 2004 and 2008 for Durham residents was cancer [14]. The leading type of cancer was lung cancer (trachea, bronchus, and lung) (see table 8). The next leading type of cancer was breast cancer in females and prostate cancer in males (breast cancer rate=28.3; prostate cancer rate=36.4). However, lung cancer rates were still 1.5 and 2.1 times higher than breast and prostate cancer rates during 2004 and 2008. The only group where lung cancer was not the leading cause of death was for minorities (prostate cancer rate=59.2; lung cancer rate=53.1). From 2004-2008, the Durham County and state death rates for cancers of the trachea, bronchus, and lung were similar (Durham – 56.3 vs. NC – 59.1) [14].

Table 8: Cancer death rates in Durham County, 2004-2008 average

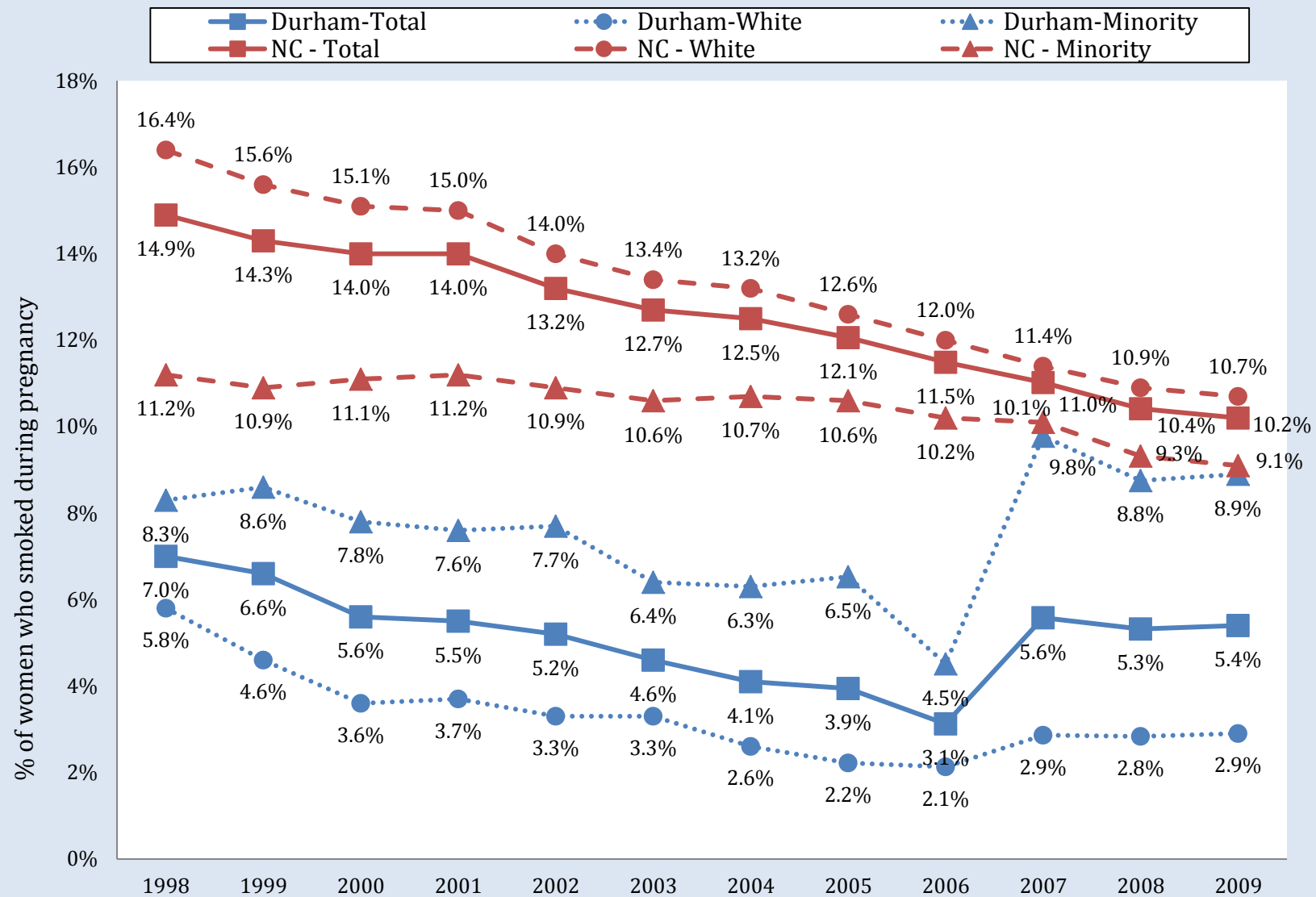
	White rate	Minority rate	Male rate	Female rate	Overall rate
All cancer	184.6	206.8	253.8	156.3	194.2
Trachea, bronchus, and lung	56.5	53.1	77.5	41.6	56.3
<i>Source:</i> 2010 County Health Data Book: 2004-2008 Race-Sex-Specific Age-Adjusted Death Rates by County					

Smoking in Pregnant Women

Whether the mother smoked during pregnancy is recorded on the newborn's birth certificate and is available from Vital Records from the NC State Center for Health Statistics. Figure 32 shows the percent of pregnant women who reportedly smoked during pregnancy from 1998 to 2008 [44]. In 2008, 5.4 percent of pregnant women in Durham smoked. This compares with 10.2 percent of pregnant women across the state.

Over time, there has been a decline in the percentage of pregnant women smoking in both Durham and the state. However, since 2006 there was an increase in the percentage of pregnant women who smoke. This has especially increased in the minority women in Durham, where the percentage of pregnant minority women smoking in 2007 and 2008 was higher than in 1998. Both white and minority Durham women are less likely to smoke during pregnancy than their counterparts across the state. However, in Durham County, minority women are more likely to have reportedly smoked during pregnancy versus white women. This is different when compared to the state data (see Figure 32).

Figure 32: Percent of mothers who smoked during pregnancy in Durham and NC, 1998-2008



Source: Basic Automated Birth Yearbook North Carolina Residents (The BABY Book)

Quitting Smoking

When an individual stops smoking, he or she will experience immediate benefits such as reduced risks of stroke, coronary heart disease, and many cancers [45]. When pregnant women quit by the first trimester of pregnancy, the chance of having a low birth weight baby is the same as for nonsmokers.

Resources for Quitting

Quit Now NC! is a statewide tobacco use cessation partnership that provides resources to help North Carolinians quit tobacco. The Quit Now NC! Web site (<http://www.quitnownc.org/>) provides information on quitting tobacco, such as who to call, a directory of local providers, Internet resources, and information about various medicines that are designed to help individuals quit. The BRFSS asks respondents who report smoking daily or occasionally whether they are aware of the Quit Now NC! phone lines or Web site. Below is a table showing the Durham respondents' answers. While the number of respondents is small, the trend does seem to show that more smokers are aware of Quit Now NC!

Table 9. Durham smokers who are aware of the Quit Now NC! phone line or Web site

	Total respondents	Yes	C.I.(95%)
2004	65	31.5%	19.8-46.1
2005	68	28.9%	14.9-48.5
2006	58	33.7%	19.8-51.1
2007	39	55.5%	35.4-74.0
2008	56	53.4%	33.8-72.1
Source: NC Behavioral Risk Factor Surveillance System (BRFSS)			

Network of Care for Children & Family Services. Network of Care is a “No Wrong Door” online information place for the individuals, families, and agencies looking for resources. This online community provides critical information, communication, and advocacy tools with a single point of entry. The Web site contains a search tool for smoking cessation services available in Durham.

(<http://durham.nc.networkofcare.org/family/home/index.cfm>)

National: <http://www.cdc.gov/tobacco/news/QuitSmoking.htm>

Quit lines:

1-800 QUIT NOW (1-800-784-8669)

Available 8 a.m.-midnight; 7 days a week

Available in English, Spanish, and other languages

For deaf/hard-of-hearing: TTY 1-877-777-6534

Quit line for pregnant smokers:

American Legacy Foundation 1-866-667-8278

Available Monday-Friday 8 a.m.- 8 p.m.

Spanish interpreters and materials are available

Youth and Substance Use

Prevalence of substance-related risk behaviors among middle and high school students

Indicator:

- Prevalence of various substance-related risk behaviors in Durham County Middle and High School students from the Youth Risk Behavior Survey (YRBS).

Relevance: The Monitoring the Future (MTF) survey has been collecting information on drug, alcohol, and cigarette use and related attitudes among adolescent students nationwide since 1975. The 2009 survey results show that cigarette smoking is at its lowest point in the history of the survey; there have also been drops in methamphetamine and cocaine use and binge drinking. Despite these positive findings, there are some areas of concern. For instance, while marijuana use was declining, prevalence rates have remained constant over the past five years, daily use of smokeless tobacco has increased, and use of prescription drugs (i.e., Vicodin, OxyContin) has increased [46].

There are a number of consequences to substance use and abuse in youth. These affect the youth themselves, families, and the communities in which they live. Substance abuse among youth can result in academic problems, health and mental health problems, and involvement with the juvenile justice system to name a few [47].

Data: Data come from the Youth Risk Behavior Survey (YRBS). The YRBS was developed by the Centers for Disease Control to monitor health-risk behaviors as well as various conditions such as obesity and asthma. This survey is conducted at the national, state, and local levels. Since 2007, Durham has conducted the YRBS with middle and high school students. 2009 data were provided by the Durham County Public Health Department.

Findings: The YRBS is only a small sample of students throughout the county. From these data, it appears that alcohol and marijuana are the most common substances used in the YRBS sample. See tables 10 and 11 for means for a variety of risk behaviors from YRBS data for Durham County middle and high school students. In 2009, there were not any statistically significant changes from the 2007 to the 2009 YRBS in substance abuse indicators in Middle School students. However, in High School students, past 30 day use, binge drinking (5 or more drinks within a couple of hours), and marijuana use (both ever and in the past 30 days) were statistically significantly higher in 2009 compared to 2007. Sniffing glue was lower in 2009 when compared to 2007. All statistical significance tests results were provided by the Durham County Public Health Department [68].

Table 10. Prevalence of activities related to substance use among Durham middle school students, 2009

	2007 (% yes)	2009 (% yes)
Have you ever had a drink of alcohol, other than a few sips?	30.3%	32.8%
Drank alcohol that someone gave you during the past 30 days?	6.2%	7.2%
Have you ever used marijuana?	15.4%	13.3%
During the past 30 days, did you use marijuana	7.4%	4.8%
During the past 30 days, did you use marijuana on school property?	3.3%	2.9%
Have you ever used any form of cocaine, including powder, crack, or freebase?	3.9%	2.8%
Have you ever sniffed glue, breathed the contents of spray cans, or inhaled any paints or sprays to get high?	16.3%	12.2%
Have you ever used steroid pills or shots without a doctor's prescription?	3.2%	2.0%
Have you ever taken a prescription drug such as OxyContin, Percocet, Demerol, Adderall, Ritalin, or Xanax without a doctor's prescription?	3.9%	3.3%
During the past 12 months, has anyone offered, sold, or given you an illegal drug on school property?	11.4%	10.6%
<i>Source: Durham Youth Risk Behavior Survey</i>		

Table 11. Prevalence of activities related to substance use among Durham high school students, 2009

	2007 (% yes)	2009 (% yes)
Have you ever had a drink of alcohol, other than a few sips? ^a	51.2%	64.2%
Drank alcohol during the past 30 days? ^b	28.8%	42.5%
During the past 30 days did you ever have 5 or more drinks of alcohol in a row, that is, within a couple of hours? ^c	11.2%	21.0%
During the past 30 days, did you have at least one drink of alcohol on school property? ^d	8%	6.1%
Have you ever used marijuana? ^e	35.2%	44.8%
During the past 30 days, did you use marijuana? ^f	23.6%	29.4%
During the past 30 days, did you use marijuana on school property? ^g	9.5%	6.5%
Have you ever used any form of cocaine, including powder, crack or freebase?	7%	4.3%
Have you ever sniffed glue, breathed the contents of spray cans, or inhaled any paints or sprays to get high?	15.9%	9.4%
Have you ever used steroid pills or shots without a doctor's prescription?	6.3%	3.1%
Have you ever taken a prescription drug such as OxyContin, Percocet, Demerol, Adderall, Ritalin, or Xanax without a doctor's prescription?	12.7%	17.1%
During the past 12 months, has anyone offered, sold, or given you an illegal drug on school property?	37.1%	34.3%
<i>Source:</i> Durham Youth Risk Behavior Survey ^a How old were you when you had your first drink of alcohol other than a few sips? ^b During the past 30 days, on how many days did you have at least 1 drink of alcohol? ^c During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours? ^d During the past 30 days, on how many days did you have at least one drink of alcohol on school property? ^e During your life, how many times have you used marijuana? ^f During the past 30 days, how many times did you use marijuana? ^g During the past 30 days, how many times did you use marijuana on school property?		

The Supply of Illicit Drugs

While the main purpose of this report is to focus on substance use and abuse in Durham North Carolina, understanding the broader context of the state's and surrounding areas' supply of drugs improves our understanding of potential trends in the Durham area. This section of the report primarily summarizes information in the 2009 Atlanta High Intensity Drug Trafficking Area Drug (HIDTA) Market Analysis.

The Atlanta HIDTA includes the Atlanta metropolitan area as well as 5 counties in the North Carolina—Durham, Johnston, Wake, Wayne and Wilson counties [48]. The interstate highways connect Atlanta to the U.S. southern border that is shared with Mexico. The Raleigh Durham area is well connected to Western routes to the west coast (route 40) and the north east cities including D.C., Baltimore, Philadelphia and Boston (routes 85 and 95).

Drug Seizures in NC and the Atlanta HIDTA

The U.S. Department of Justice National Drug Intelligence Center collects information on drugs seized throughout the Atlanta High Intensity Drug Trafficking Area (see table 12) [49]. This information provides a sense of some drugs such as cocaine, methamphetamine, heroin and marijuana that are passing through the communities. While very small amounts may have been seized in the Triangle during these 6 months, this does not mean that these drugs aren't available in high quantities. Drug seizures reflect various law enforcement operations including routine traffic stops and searches as well as undercover operations. Undercover operations sometimes take weeks, months or even years of laying ground work before making a big seizure.

Table 12. Atlanta High Intensity Drug Trafficking Area (HIDTA) drug seizures in 2008

	NC Triangle, Jul-Dec (kgs)	Total for the Atlanta HIDTA (kgs)
Powder Cocaine	10.56	817.34
Crack Cocaine	0	1.65
Ice Methamphetamine	0	56.85
Powder Methamphetamine	2.24	8.64
Marijuana	0.1	5,203.15
Hydroponic*	0	42.89
Heroin	1.48	15.66
GHB (gamma hydroxybutyrate)	0	3.63
MDMA (in dosage units)	79	83,283

Source: National Drug Intelligence Center. Atlanta HIDTA 2009(50)

Note: Total include drug seizures several initiatives including a) Dekalb, GA, b) Metro, c) Expanded Operations, d) NC Triangle and e) Domestic Highway Drug Enforcement

* Hydroponics are materials for growing plants in nutrient rich solutions rather than soil.

Another data collection effort on drug seizures is the national seizure system that collects information on methamphetamine laboratory seizures (see table 13). In general, methamphetamine production in the Atlanta HIDTA is considered to be low to moderate. The decrease in methamphetamine lab seizures from 2005 to 2006 is likely to be a consequence of measures that restricted the accessibility of over the counter medications such as Sudafed®, that contain ingredients for methamphetamine production like pseudoephedrine. The Department of Justice notes that the increase from 2007 to 2008 (from 70 to 89 labs) in North Carolina counties is worth monitoring to ensure that the trend does not continue.

Table 13. Methamphetamine laboratory seizures in North Carolina and the Atlanta HIDTA, 2004-2008

Area	2004	2005	2006	2007	2008
North Carolina counties in the Atlanta HIDTA (Durham, Johnston, Wake, Wayne, Wilson)	5	9	7	8	8
North Carolina (all counties)	241	174	88	70	89
Atlanta HIDTA (all counties)	34	38	21	11	12
<i>Source: National Seizure System, run date March 16, 2009(51)</i>					

According to the National Drug Intelligence Center, most of the marijuana available in the Atlanta HIDTA is grown in either Mexico or Canada. However, some is locally grown. The severe drought in 2007 damaged much of the marijuana plants. Fluctuations in the number of plants eradicated reflect both resources for eradication as well as the number of plants. Therefore, it is important to note that changes in the number of plants may not reflect changes in the supply of the drug (see table 14).

Table 14. Cannabis Plants Eradicated at Outdoor and Indoor Grow Sites in Georgia and North Carolina, 2004-2008

	Outdoor					Indoor				
	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
GA	18,122	27,067	64,995	11,851	47,607	616	642	1,610	9,585	2,840
NC	32,572	68,491	99,379	15,115	103,711	3,393	2,391	2,110	1,253	1,489
Total	50,694	95,558	164,374	26,966	151,318	4,009	3,033	3,720	10,838	4,329
<i>Source: Domestic Cannabis Eradication/Suppression Program, as of February 5, 2009(51)</i>										

Price of Drugs in Durham County

Indicator:

- The price for a specific quantity of a given drug

Relevance: The price of illegal drugs is the result of supply and demand. Rising prices result from a decrease in supply which is usually caused by more effective drug enforcement efforts. Increases in price may increase street crime (ex. addicts may need more money to meet their needs), or medical needs (ex. price affects drug quality, which in turn affects the medical problems that are being seen). Decreasing prices can lead to more users, users purchasing larger doses, and increased drug purity, which will also affect prevention, treatment, and medical resources. One of the benefits of the surveillance system is that, by sharing information, the community will be in a better position to respond to such changes.

Data: Data were provided via personal communication October 2010 by the Durham County Sherriff's Office in 2006 and in 2010.

Findings: The price of heroin appears to have dropped from \$20 for a dose in 2006 to \$10-\$15 for a dose in 2010. The price of cocaine and crack seems to have remained relatively constant during this time. The price of cocaine and crack cocaine appear to have remained relatively constant over this time period. On a per dose basis, low grade marijuana is relatively cheap at \$3 a dose relative to other drugs such as ecstasy (\$7-\$10 per dose), and heroin (\$10-15 per dose). See table 15 for a listing of prices and information about various drugs.

Table 15. Drug prices in Durham 2006 and 2010

Drug	2006 Notes	2006	2010
Heroin	It is sold on the street after being cut and packaged in bindles. Bindles vary in purity from .1 gram heroin to as little as .04 grams and can be cut with a variety of substances, including lidocaine, caffeine, lactose, acetaminophen, or others. One bindle is approximately 1 dosage unit. Ten bindles are a bundle.	1 bindle \$20 10 bindles \$150	1 bindle \$10 - \$15 1 ounce \$2,800
Cocaine	On the streets of Durham, cocaine is usually cut with a variety of possible substances and then sold. The actual amount that the buyer receives is often less than advertised. 3.5 grams=an eightball 4.5 ounces=a "biggie" eight	1 ounce \$1,000 3.5 grams \$125 4.5 ounces \$4,000-\$4,500.	1 gram \$50 1 ounce \$1,000 - \$1,400
Crack	1 kilogram of cocaine can be purchased for between \$18,000 and \$20,000. When this same amount of cocaine is cooked into crack, it can generate as much as \$100,000 on the street. 1 gram of cocaine produces 5 dosage units of crack 1 dosage unit=a rock	1 rock \$20	1 rock \$20 (.3 of gram) 1 ounce \$1,000 - \$1,400
MDMA (Ecstasy)			1 pill \$7-\$10
Methamphetamine			1 gram \$50 1 ounce \$1,400.00
Marijuana Low Grade			1 gram \$3-\$7 1 ounce \$180 - \$200
Marijuana High Grade			1 gram \$15 -\$20 1 ounce \$350 - \$450
Oxycodone, Percocet, Endocet, Oxycotin, Vicodin			\$1 for every milligram 10mg=\$10 20mg=\$20
Hydrocodone			\$1 for every milligram
Source: Durham County Sheriff's Office			

Alcohol Beverage Control Board of Spirituous Liquor to the General Public

Indicators:

- **ABC gross sales:** Sales by the local Alcoholic Beverage Control board of spirituous liquor to the general public; spirituous liquor to mixed beverage permits, such as restaurants and clubs (where applicable); and wine (except that there were no reported wine sales in 1980-1983 and 1985).
- **ABC State Excise Tax:** Excise tax collections remitted to the Department of Revenue for the general fund, based on collections made during the fiscal year
- **ABC Local Government Distributions:** The portion of net profits from ABC stores which is distributed to the general fund of the county or municipal government, as determined by the local ABC board. The difference between this amount and net profits (the difference can be a positive or negative amount) constitutes retained earnings for the local ABC board.
- **ABC Rehabilitation Contribution:** Bottle charges of one cent on each bottle containing 50 milliliters or less and five cents on each bottle containing more than 50 milliliters, remitted to county commissioners for treatment of alcoholism and substance abuse, or for research or education on alcohol and substance abuse. (Does not include collections of the additional five cents per bottle tax imposed August 1, 1983. Those proceeds are credited to the general fund of the local government and are included local government distributions.)
- **ABC Reserve for Law Enforcement:** Amount remitted by the local ABC board for law enforcement, which must be at least five percent of receipts. These funds can be used to employ an ABC officer or contract with local law enforcement officials.
- **ABC Alcohol Education and Research Contribution:** Amount remitted by the local ABC board directly or to the county commissioners for treatment of alcoholism or substance abuse, or for research or education on alcohol or substance abuse.

Relevance: In North Carolina local communities determine whether or not spirituous liquor can be sold in the county (and if not the county, then the township or city). If spirituous liquor can be sold in the community then a local Alcohol Beverage Control (ABC) board is established. Each ABC Board has a chairperson and two to six board members who are appointed by their governing authority. The Board has authority to set policy and adopt rules that conform to the rules laid out by the ABC Laws and Commission Rules. To enforce laws,

Local ABC Boards can either employ local ABC law enforcement officers or make other provisions to enforce ABC laws. The Durham County ABC employs three full-time and one part-time officer [52] . No state funds are used to establish or operate local ABC boards in

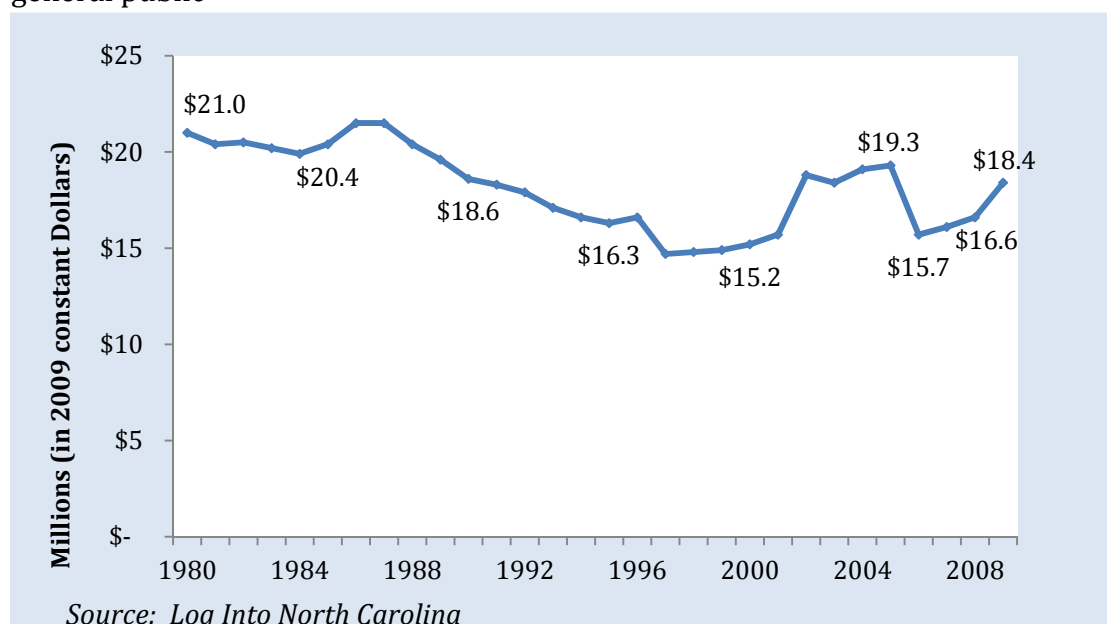
North Carolina. Revenue generated through the sales of spirituous liquor is contributed to the state, county and city.

Data: The Web site “Log into North Carolina” compiles data from a variety of sources by county and year [53]. Information on ABC sales and revenue come from the Department of Commerce.

Findings: Figure 33 present information on gross sales of spirituous drinks . All dollars are presented in 2009 dollars to take into account inflation.

In 2009, there were approximately \$18.4 million in gross sales of spirituous liquor (see Figure 38) in Durham County. Six percent of these dollars go to Durham County and City for a total of \$1.12 million.

Figure 33. Sales by the local Alcoholic Beverage Control board of spirituous liquor to the general public



Figures 34 and 35 look more closely out the distribution of revenue from ABC sales locally. Currently, about five percent of gross sales are given to local government. This is up from about 2.5 percent in 2000 but down from about 8 to 9 percent in the early 1980's.

ABC law enforcement activities include inspecting ABC outlets such as restaurants and night clubs and enforcing the state's alcohol, tobacco, bingo and gambling laws. Alcohol law enforcement would make arrests for things such as fictitious ID, driving while under the influence of a substance, alcohol and controlled substance violations to name a few.

The amount of money and the percent of the percent of gross sales available for rehabilitation from the ABC funds have been steadily declining. In 1980 there were approximately \$180,000 available for rehabilitation (in 2009 dollars) vs only \$77,300 in 2009. This represents a drop from about .9% of gross sales in 1980 to about .4% in 2009.

Figure 34. County Dollars gained from ABC profits by allocation

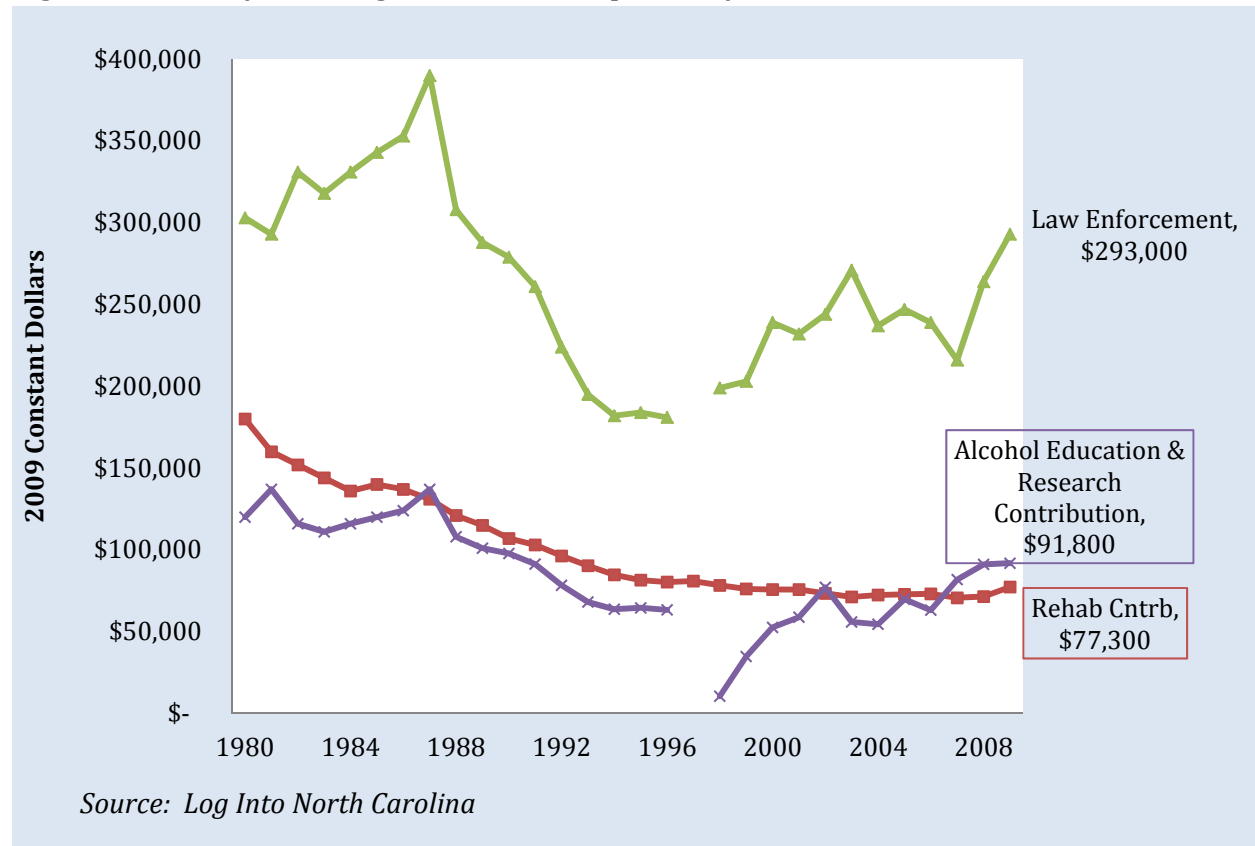
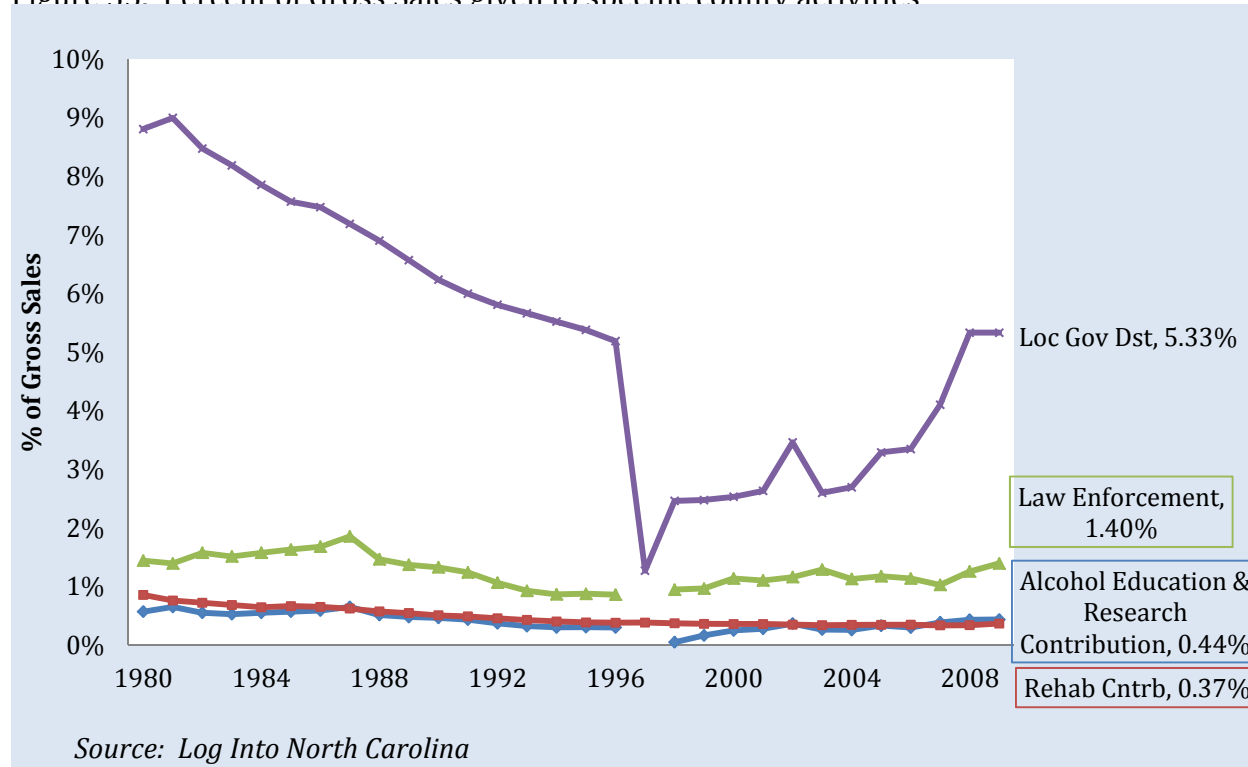


Figure 35. Percent of Gross Sales given to specific county activities



Treatment Services in Durham County

The local government agency responsible for managing behavioral health treatment and developmental disability services for adults and children with Medicaid or without insurance is The Durham Center Local Management Entity (LME). An array of services is available for adolescents and adults in Durham County (information is available on Durham Center's website at www.durhamcenter.org) [54].

According to The Durham Center Needs Assessment, 70% of the clients with substance use issues that they serve do not have Medicaid or other health insurance. The Durham Center administers state and local funding for services for indigent consumers who otherwise do not have means to pay for services. Approximately \$990,400 was spent in FY 2009 on child/adolescent services. Less than 1 percent of this went toward substance use services for children although about 4 percent of children in this population had a substance use disorder. In FY 2009, approximately \$5,924,600 was spent on adult care and 28 percent (about \$1,675,000) went to substance use treatment for 32 percent of the population [65]. While Durham has a host of treatment programs available to work with these individuals, the community is in need of additional services for individuals without insurance. An average of 1 – 2 individuals per month are on a waiting list of services [66].

Substance Use Treatment Services for Individuals Involved in Delinquent or Criminal Activities

As described throughout this report, many individuals with substance use needs are encountering our law enforcement agencies. The Durham Center LME partners with the Criminal Justice Resource Center and Drug Treatment Court to provide direct services to individuals who are incarcerated or have criminal histories.

The Criminal Just Resource Center (CJRC)

The Criminal Just Resource Center (CJRC) is a Durham County government agency that functions to: (1) deliver quality rehabilitative services so offenders and at-risk youth can become productive successful citizens; (2) supervise and monitor high-risk offenders residing in Durham County; and (3) support the criminal justice system at large through collection and dissemination of criminal and treatment histories (cite the CJRC report).

The largest services provided by the CJRC are substance abuse treatment. In fiscal year 2009, CJRC provided the following services:(note that some individuals may be treated in more than one program so these numbers can be added to reach the total number served):

- 408 of 455 community-based clients received substance use treatment
- 34 Drug Treatment Court clients
- 430 jail inmates through the STARR program (81% were court ordered), Substance Abuse Treatment and Recidivism Reduction (STARR) which is a cooperative effort between CJRC and the Durham County Office of the Sherriff. STARR is an intensive chemical dependency treatment program for criminal offenders. Individuals who successfully complete STARR can participate in STARR GRAD, an additional four week program.
- 193 inmates through STARR GRAD (60% were court ordered)

Court Services

The Durham Center and the CJRC partner to provide substance abuse and mental health screenings for the District Courts and the Department of Social Services. One innovative aspect of this partnership is that Court Services has access to criminal justice and mental health records when making recommendations. During FY 2009, 207 substance abuse screenings were conducted in the district courts.

Drug Treatment Court

Durham County operates a Drug Treatment Court, designed to provide treatment services to chemically dependent nonviolent offenders by holding these offenders responsible for complying with court-ordered treatment plans. An overarching goal of the drug treatment

court is to help offenders recover from their addiction by providing the appropriate services and in turn help reduce the recidivism rate. Evidence suggests that drug treatment courts are effective.

Adolescents Receiving Treatment Services

Indicators:

- Number and percent of youth receiving outpatient and residential services through the public mental health system relative to need for treatment
- Drug mentions of Durham adolescents (aged 12-17 years) who are treated for substance abuse or mental health issues.

Relevance: By knowing how many youth need help and what substances youth have access to, prevention and treatment strategies can be better planned.

Data: Data for this report comes from The Durham Center LME and NC-TOPPS (North Carolina Treatment Outcomes and Program Performance System) regarding patients receiving treatment from July 1, 2008 to June 30, 2009, fiscal year 2009 (FY09) [55].

Treatment agencies serving youth in more intensive and comprehensive services are required to submit outcome data at the start of the services (“initial” data) and after 3, 6, and every 6 months thereafter (“update” data) into an online database called NC-TOPPS:

1. Adolescents in substance abuse treatment (aged 12-17), initial interviews (n=73), and
2. Adolescents in mental health treatment (aged 12-17), initial interviews (n=622).

NC-TOPPS data represents approximately 22% of the youth in treatment.

Findings: An estimated 1,476 adolescents in Durham County need substance abuse treatment. Treatment providers in The Durham Center LME’s network served 180 adolescents (12% in need) in state fiscal year 2009 (July 1, 2008 – June 30, 2009) [56]. Data of youth paying out of pocket or using private insurance for services is unknown.

See table 16 for demographics of youth in treatment, submitted in NCTOPPS database. It is interesting to note that African-American males comprise the majority of clients that were served in originations that reported data.

Table 16. NC-TOPPS Gender and Race/Ethnicity of adolescents in substance abuse and mental health treatment in Durham County, 2009

	Substance use tx	Mental health tx
African-American Male	55%	47%
White Male	5%	6%
Other Male	8%	6%
African-American Female	25%	32%
White Female	1%	3%
Other Female	5%	5%
Hispanic Origin (Male & Female)	12%	10%
<i>Source:</i> NC-TOPPS Initial Interviews: Adolescent (12-17) Substance Abuse Consumers, n=73 and Mental Health Consumers, n=622, Durham LMEs <i>Note:</i> Hispanic Origin could be more than one race		

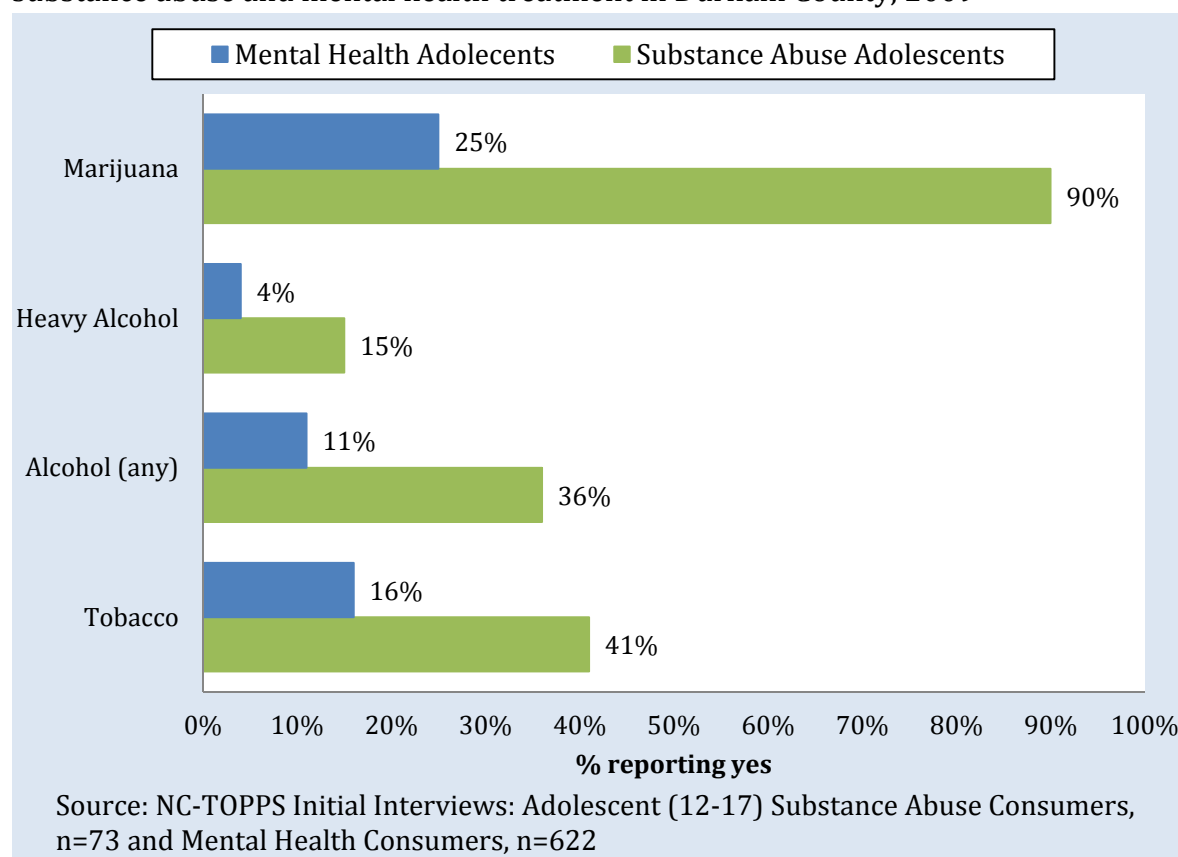
Adolescents and illicit substances

Among adolescents receiving mental health services in Durham, 17 percent reported using illicit substances other than tobacco or alcohol (19 percent reported using tobacco or alcohol) (this was comparable to similar youth in the rest of the state at 17 percent). When asked to report the types of illicit drugs used in the past 12 months, the most commonly cited was marijuana (25 percent). Ten percent of adolescents in mental health treatment were receiving services for both mental health and substance abuse. Of adolescents in substance abuse treatment, 12 percent were receiving substance abuse services only and 88 percent were receiving substance abuse and mental health services (see figure 36 for a description of substances used in the past 12 months).

Among adolescents receiving treatment for substance abuse in Durham, clients reported using the following in the past 12 months:

- Marijuana 90%
- Cocaine 5%
- Benzodiazepine 1%
- OxyContin 1%

Figure 36. NC-TOPPS self-reported drug use in the past 12 months by adolescents in substance abuse and mental health treatment in Durham County, 2009



Adults Receiving Treatment Services

Indicator:

- Number and percent of adults receiving outpatient and residential services through the public mental health system relative to need for treatment
- Number of adult admissions for substance-related crises
- Drug mentions of Durham adults who are treated for substance abuse.

Relevance: Data from the Durham Center LME provides information on individuals in public mental health treatment for substance abuse. In particular, this is a good source of information on the types of drugs that individuals in Durham are exposed to and their treatment needs.

Data: Data for this report comes from The Durham Center LME and NC-TOPPS (North Carolina Treatment Outcomes and Program Performance System) regarding patients receiving treatment from July 1, 2008 to June 30, 2009, fiscal year 2009 (FY09)(55).

Individuals with Medicaid or without insurance, and unable to pay for services, are served by The Durham Center LME and its network of providers.

Treatment agencies serving adults in more intensive and comprehensive services are required to submit outcome data at the start of the services (“initial” data) and after 3, 6, and every 6 months thereafter (“update” data) into an online database called NC-TOPPS. Two NC-TOPPS reports were examined:

1. Adults in substance abuse treatment, initial interviews (n=1014), and
2. Adults in mental health treatment, initial interviews (n=1432).

NC-TOPPS data represents approximately 40% of the adults served by The Durham Center network of treatment agencies.

Findings: An estimated 18,064 adults in Durham County need substance abuse treatment. Treatment providers in The Durham Center LME’s network served 1,899 adults (11% in need) in fiscal year 2009 (July 1, 2008 – June 30, 2009)(56). Data on adults paying out of pocket or using private insurance for services is unknown. An average of 2 adults were placed on a waitlist every month because treatment services reached capacity.

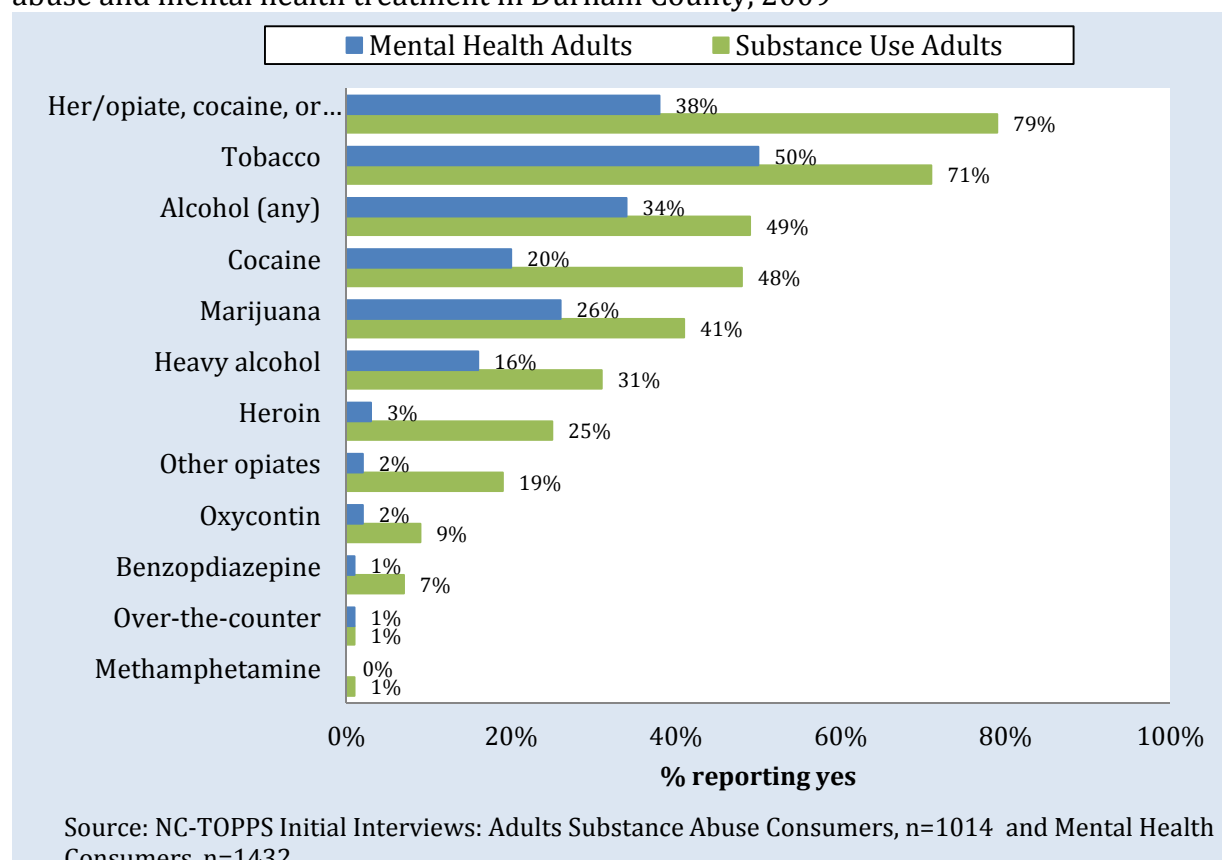
See table 17 for age, gender, and race description. The percent of adults reporting that they are of Hispanic origin is smaller than that seen in adolescents receiving treatment.

Table 17. NC-TOPPS Gender and Race/Ethnicity of adults in substance abuse and mental health treatment in Durham County, 2009

	Substance use tx	Mental health tx
African-American Male	29%	25%
White Male	22%	9%
Other Male	2%	2%
African-American Female	25%	49%
White Female	20%	13%
Other Female	2%	2%
Hispanic Origin (Male & Female)	3%	3%
<i>Source:</i> NC-TOPPS Initial Interviews: Substance Abuse Consumers, n=1014 and Mental Health Consumers, n=1432, Durham LMEs <i>Note:</i> Hispanic Origin could be more than one race		

Figure 37 indicates the types of substances being used in the past 12 months by those receiving treatment.

Figure 37. NCTOPPS self-reported drug use in the past 12 months by adults in substance abuse and mental health treatment in Durham County, 2009



Crisis Services

Adults with substance use disorders, or co-occurring substance abuse and mental health disorders, accounted for approximately 64% of emergent admissions to Durham's behavioral health crisis facility, Durham Center Access. There were a total of 2,155 admissions in state fiscal year 2010 (July 1, 2009 – June 30, 2010) to 23-hour crisis observation beds and 1,463 to 2 – 14 day stabilization beds. Alcohol was the primary drug of choice for patients admitted to the crisis services [67].

³ Individuals with substance use disorders only account for 40% and individuals with substance abuse and mental health disorders make up about 24%.

Discussion

This report made use of numerous data sources provided by state and community organizations to demonstrate the ways in which substance use is affecting the population and the public organizations that serve our community. Numerous studies have examined the national costs of substance use and the potential savings of treatment. Although estimates with exact benefit to cost-to-benefit vary in range, there is little controversy that the benefits far exceed the costs (57, 58). Studies have estimated cost savings of 7:1, which means for every \$1 spent on treatment, the community saves \$7. Societal cost savings of substance use treatment include reduced crime, higher employment, and reduced dependence upon public systems to name a few benefits.

In order for this report to be most useful in planning prevention and intervention efforts, it is important for community members to read, reflect, and communicate with others about the report. Community members might have additional information to contribute or may have additional questions to help identify next steps. The Partnership for a Healthy Durham, Substance Abuse and Mental Health Committee is in a position to develop an action plan based on the findings of this study. Here we summarize a few highlights from the report that the community may want to address.

Improve collaboration and training to help law enforcement agencies identify individuals in need of substance use treatment

The connection between individuals who abuse substances and delinquency or criminal activities is well documented. Law enforcement agencies including the police, the sheriff's office, the prison system, and juvenile justice are working with community members who are users and potentially addicts of alcohol and illicit substances. Currently there are several innovative collaborative programs in operation in Durham that help to combine the expertise of substance use treatment professionals with law enforcement agencies, which could be expanded. One example is the MAJORS program whereby a licensed therapist provides access to assessments and connection to mental health/substance use providers for court-involved youth. Another example is the Drug Treatment Court in Durham that helps hold court-involved offenders accountable for attending treatment. Another is the jail liaison program whereby a behavioral health specialist jointly works with the Sheriff's Department to provide the appropriate assessment and treatment for county inmates.

Curbing Demand

Many of the harms from substance use in Durham County occur because of overuse of legal substances such as alcohol and tobacco products. One immediate concern is drinking and driving. Accidents are more likely to be fatal if alcohol or other substances are involved. Approximately seven individuals in Durham County die each year in alcohol-related

accidents. Moreover, both youth and adults report being driven by or driving after drinking. Continuing or supporting campaigns to keep the public alert to this issue – and monitoring drivers – are important steps to preventing these deaths. A literature review conducted by the Centers for Disease Control concluded that media campaigns can be an effective strategy for reducing alcohol-related crashes [59]. The CDC has also identified the following as effective strategies to prevent injuries: a) enforcing existing blood alcohol laws, minimum drinking age requirements, and zero tolerance laws for underage drinkers, b) revoking licenses of people who drive while drunk, c) using sobriety checkpoints, d) requiring substance abuse assessment and treatment for individuals who have been convicted of driving while intoxicated, and e) implementing community-based approaches [37].

One concerning trend in Durham County is the increase in pregnant non-White women who are smoking. The negative health consequences of this behavior are well known (60). According to the Centers for Disease Control and Prevention, smoking before and during pregnancy is the single most preventable cause of illness and death among mothers and babies [61]. The NC General Assembly's passage of H. B. 2, disallowing smoking in restaurants and public buildings effective January 2, 2010, helps to reduce exposure to second hand smoke. Greater efforts and funding should be dedicated to promoting the dangers of smoking and second-hand smoke, along with resources to help individuals quit, among minority populations.

Additional involvement from community agencies

Although this report included a substantial amount of information on what is occurring in Durham, the community would benefit from better capturing the perspectives of community representatives. In turn, in order to sustain the share of information, it would be important to work together to develop solutions that build upon the strengths of the community. It is important to not ask one agency to continuously provide information or to do a service without also trying to help alleviate the problems that they face. Thus, the multidisciplinary agencies and community citizens involved with the Partnership's Substance Abuse and Mental Health Committee could create and implement an action plan to use the data in this study to highlight opportunities for policy and practice changes.

For example, law enforcement may want to conduct activities like the Durham Bulls Eye (but focused on substance use rather than violence) where they identify "hot spots" of where individuals live who have been arrested in the previous two years for substance-related charges. In the target area of the Durham Bulls Eye, the project successfully reduced crime by 42%, violent crimes by 28%, and violent gun crimes by 29% during August 1, 2007 through July 31, 2008. The decline in non-self-initiated drugs was not statistically significant. However, this project was focused on violent crimes. It may be that similar

project focused on substance use would reduce illegal substance use behaviors. It would also help community planners develop strategies to help prevent substance using behavior in an effective way. Monitoring the community over time may help the community to assess whether their efforts have been successful.

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